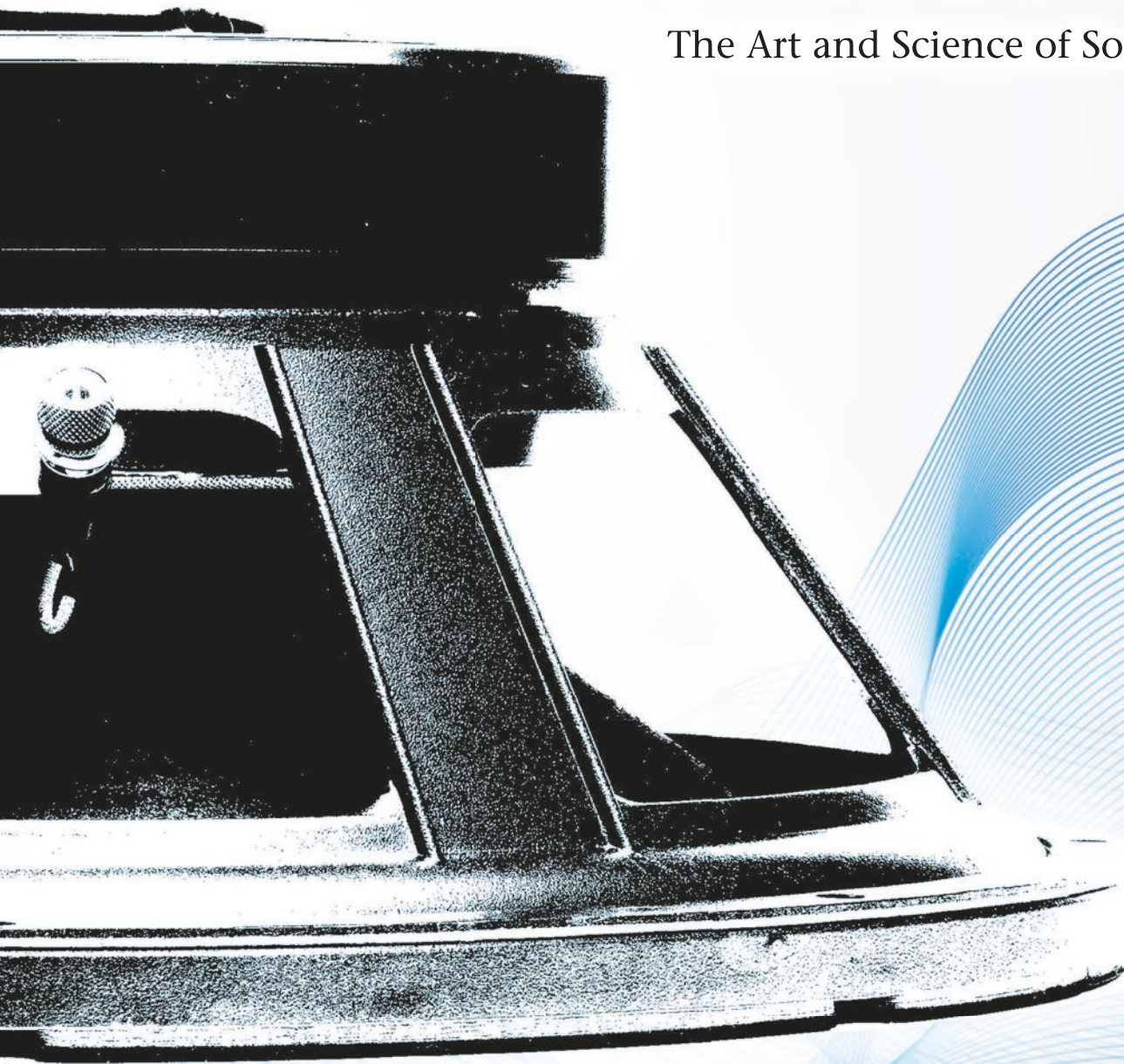




EMINENCE®

The Art and Science of Sound



PROFESSIONAL AUDIO **2014**

LOUDSPEAKERS | COMPRESSION DRIVERS | HORN FLARES | CROSSOVERS

TECHNOLOGY

Eminence Designer	5
D-fend™ Loudspeaker Protection	5

LOUDSPEAKERS

Professional Series	6
Neodymium Series	33
American Standard	46

HIGH FREQUENCY

HF Drivers	74
Supertweeters.	78
Horn Flares	78
Crossovers	79

REFERENCE

Loudspeaker Data Explained	80
Footnotes	83

For a complete list of Eminence distributors and to access our US dealer finder, please visit www.eminence.com.



IN 1966 Bob Gault founded what was to become the world's largest loudspeaker manufacturing company after working as an engineer for Magnavox and CTS (Chicago Telephone Supply). Ironically, Gault started Eminence hoping to maintain three 18" speakers per day, based on a commitment from Ampeg's Everett Hull. Under the leadership of Gault and most recently his son, Rob, the company's capacity has grown to over 10,000 speakers per day, employing nearly 200 people.

Gault was the president of Eminence from the company's inception until 1992. He officially retired in 1993, but continued to make valuable contributions to the company. Gault passed away on October 4, 2002.



He was a husband, father, and grandfather. Gault was also an avid golfer. He is greatly missed by his family, the music industry, and the Eminence community.

Our first facility was less than 6,000 sq. ft. and employed

around thirty people. In 1972 Eminence Speaker moved to a new location in Shawnee Industrial Park on Mulberry Pike where we remain today. The facility has seen several additions. The first building in this location was just less than 30,000 sq. ft., but now has grown to include nearly 100,000 sq. ft. all under one roof.

1 ENGINEERING

Eminence engineers diligently work to satisfy the needs of individual customers through a custom design, or to assist in the integration of an off-the-shelf Eminence product for their application. Through the use of multiple design and testing technologies along with our fused deposition modeling rapid prototype machine, our engineers produce as many as 2,000 hand-built samples per year.

2 SALES & CUSTOMER SERVICE

All sales for our custom OEM and Eminence branded products are administered here. We pride ourselves on our customer service, and have built a reputation within our industry for providing the highest quality products and support. Our 7-year warranty says it all.

3 MANAGEMENT / ADMINISTRATION

This area houses Accounting, Production Scheduling, Marketing, Purchasing and Executive Management.

4 VOICE COIL DEPARTMENT

Eminence has developed the finest voice coils in the industry. We currently produce 1 layer "edgewound", 2 layer, 4 layer, and dual 2 layer coils. Winding lengths vary from .210" (5.3 mm) to 1.25" (31.75 mm). Standard impedances range from less than 1 ohm all the way to 32 ohms.

5 HIGH FREQUENCY DEPARTMENT

Eminence manufactures HF products for both our branded and OEM product lines. Products include several 1" throat devices, some incorporating neodymium motor structures, and others with standard ferrite motor structures. Eminence also manufactures a larger 2" throat HF device.

6 WAREHOUSE

Inventory of all Genuine Eminence finished goods is stored here.

7 RECEIVING / Q.C.

Incoming components are received in this area and go through a rigorous Q.C. evaluation process. We believe quality products can only be made from quality components.

8 COMPONENT STORAGE

Many of our components, including cones, gaskets and packaging are stored here.

9 DUST CAP DEPARTMENT

We have the capability to produce custom-logo dust caps, incorporating the use of pad printing, decal transfer or hot stamping.

10 PRESS SHOP

Our Press Shop allows us to make all our top plates and back plates, as well as the ability to modify many purchased components. The Eminence Press Shop houses 13 presses, including three 300-ton Verson presses and one 600-ton Multipress.

11 TOOL ROOM

The machinery and technology used in the manufacturing of loudspeakers is not something readily available from your local hardware store. The efforts of this department represent some of the industry's most significant advancements in loudspeaker production.

12 PAINT DEPARTMENT

Eminence uses a state-of-the-art electrocoat paint system to apply a uniform coating of cationic epoxy paint over the entire surface of our metal parts, including the magnetic gap, to a controlled thickness of less than 0.001".

13 FINAL ASSEMBLY

The Eminence Final Assembly process is based on an integration of human elements along with the finest assembly machines and tooling available in this industry. There is no substitute for conscientious assembly technicians involved in the manufacturing of our products.

14 TESTING / PACKING DEPT.

All products move from Final Assembly to our Testing/Packing Department where they are carefully inspected. After cosmetic amendments are added, they are packaged for shipment throughout the world.

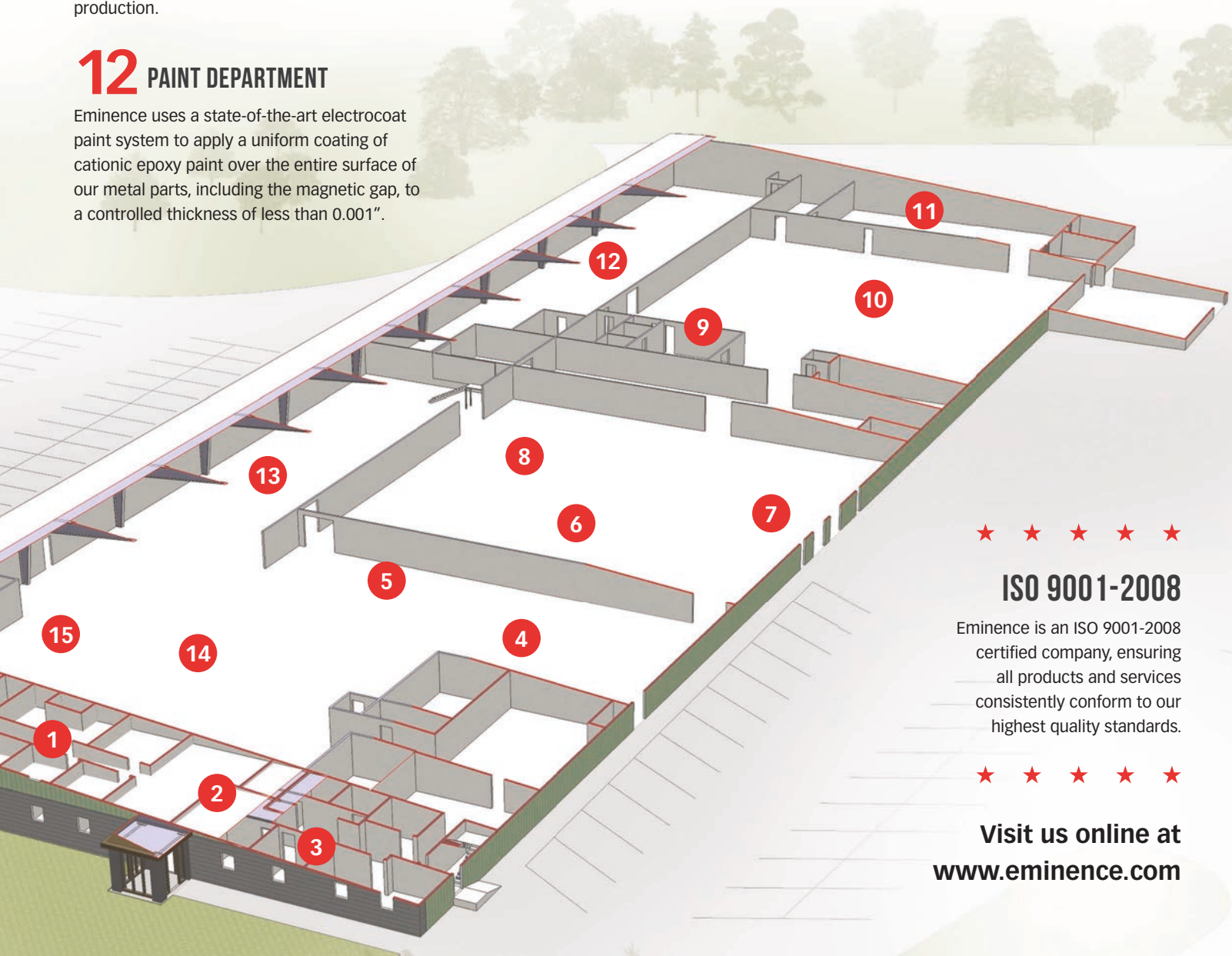
15 SHIPPING / FINISHED GOODS

Most products we manufacture on a custom basis go from Testing/Packing to Shipping and are quickly dispatched to respective customers.



You Tube

Tour our factory and learn more about our history, employees and processes. Search YouTube for "We are Eminence."



ISO 9001-2008

Eminence is an ISO 9001-2008 certified company, ensuring all products and services consistently conform to our highest quality standards.



**Visit us online at
www.eminence.com**

CUTTING-EDGE SUPPORT

Our mission is to provide the best Quality, Value and Service to meet your needs.



✓ 7-YEAR WARRANTY*

Buy or sell Genuine Eminence products with complete confidence, knowing they come backed with the industry's leading warranty. Eminence products are designed and assembled in the USA by the most skilled and dedicated employees you will find anywhere.

✓ BUYEMINENCE.COM

Order online – anytime! As a dealer you will have 24/7 access to our entire product line at BuyEminence.com



✓ WIDE PRODUCT SELECTION

From high-end pro audio applications, to replacement or upgrade guitar and bass speakers, Eminence has a hand-made product that will exceed your expectations.

✓ UNRIVALED CUSTOMER SERVICE

We take great pride in our commitment to quality, value and service, so if you have questions, we are ready to assist. From Tech Support, to Sales and Marketing, to even our Design Engineers, we will take the time to personally consult with you to ensure your needs are met.

Call (502) 845-5622

E-mail – info@eminence.com

*Warranty policy may vary outside of the continental United States and Canada. Check with your local distributor for warranty details.

BECOME A DEALER TODAY!

Loudspeakers are an incredible accessory item for any music store! The consumer's desire to maintain or upgrade their equipment rather than buying new makes it even more important and lucrative to consider.

For the cost of a couple of keyboards or amplifiers, any dealer can obtain a nice stock of well regarded replacement and upgrade loudspeakers for musical instrument amplifiers or speaker cabinets. Don't waste your time though if the plan is to put them on a shelf in the service center. If you kept strings and tuners back there, you wouldn't sell many of them either.

Replacement and upgrade speakers need to be on the store floor, close to checkout just like any other accessory. They won't sell if they are not there where people can see them. Most all speaker manufacturers have nice packaging, catalogs, banners, application tools, and technical service departments standing by to help you make recommendations to your customers.

As with all viable accessory items, dealers can enjoy significant margins. Those that creatively display loudspeakers and work with manufacturers to provide application solutions for consumers often enjoy thousands of dollars in additional sales volume. What's more, sales of loudspeakers are a new segment of the market for most dealers...a segment that tends to flourish when sales of other products are down. They also provide dealers an option for consumers who just can't financially swing a new amplifier or new monitor, or new pair of speakers.

For more information call (502) 845-5622

CUTTING-EDGE TECHNOLOGY

Offering the tools to design bullet-proof enclosures.



EMINENCE DESIGNER

Eminence Designer is a state-of-the-art loudspeaker enclosure design program for PCs. It can calculate a box design that will bring out the best response from a loudspeaker in seconds - it can even suggest a box for your loudspeaker! Eminence Designer models closed, vented, bandpass and passive radiator boxes. It will print box drawings and graphs for a professional presentation. Eminence designer is quick to learn and easy to use.

1. Enter the loudspeaker parameters (for Eminence loudspeakers, simply select the model; other loudspeaker parameters can be entered manually).
2. Calculate the box volume and tuning. This is very easy with the help of the "Suggest" button.
3. Evaluate the performance from the nine graphs.

When the program is first run, a "Welcome" window will appear to help you configure the program and to guide you through its illustrated online manual, which contains a "Box Designers Guide" to help beginners learn about sound, speakers and box design. A "Reference" section describes every feature of the program.



Learn more at
D-fend.net

With the D-fend™ SA300 there are no more worries about blown speakers, HF drivers or crossovers. Or even worse: fire caused by excessive heat. Not only does this revolutionary, patent-pending technology keep your system safe, but your venue and audience as well. The user simply sets the thresholds and D-fend™ monitors and limits the amount of input power it passes through to the loudspeaker. It's USB compatible, and can be programmed to your specifications from a desktop or laptop. Just set it and forget it. Protect your products, venue, customers, and your reputation with the first passive speaker protection system that is virtually indestructible.



INSTALLERS

Word of mouth can be an installer's best friend or worst enemy. D-fend™ will not only protect your carefully installed equipment, but also gives you peace of mind knowing your reputation is protected as well.



RENTAL COMPANIES

By using D-fend™ you can rent out your speakers and know that you'll get them back in the same condition they left. So what comes in on Monday can go back out the door again without a visit to your repair shop.



OEM MANUFACTURERS*

What can be better than offering a bullet-proof loudspeaker system? With D-fend you can offer your customers something they've never seen before: a passive speaker that can't be destroyed, no matter how hard you punish it.



END-USERS

Own some passive speakers? Chances are you've come closer than you think to blowing a driver. There's nothing worse than stopping a show in progress because you just lost your subwoofer. Why take the chance?



See the technology demonstrations on our YouTube channel:
www.youtube.com/user/eminencespeaker

LIVE OR IN THE STUDIO

Our **PROFESSIONAL SERIES** takes performance to a new level.

From dialing a sound in, to rocking it out, for years Eminence Professional Series loudspeakers have been the leading choice in audio applications worldwide.

Arena arrays, on stage PAs, or late-night recording sessions – there's an Eminence speaker that'll make your hard work pay off in tonal perfection.

We speak the language of audio engineers. And for us, the first word is aluminum. At the heart of our Professional Series is a cast aluminum Eminence chassis – lightweight and strong. It holds the magnetic field within the gap and keeps power compression lower by wicking away heat from the voice coil. Motor strength is greater while keeping the stray magnetic field lower. The chassis and all metal parts are coated with an epoxy-acrylic finish. It's done in-house so we control the e-coat process, letting us create a coating within 0.001" – the diameter of a human hair - of our specifications. This is critical for close tolerance transducer motor designs. Front or rear sealing gaskets allow for front or rear loading. Attention to detail. It's what makes the difference between average sound or stunning performance.

Our experience goes beyond how to make great speakers. We also know what kind of speakers you need. Heavy-duty subwoofers, low distortion woofers, and super high power woofers. Or lightweight neodymium transducers in truncated frames for line arrays. Each designed to work best where you need it most.

NEW

LA series 10", 12" and 15" models designed for tight fitting horn loaded applications.



The LA10850, 12850 and 15850 are the most compact cast-frame models yet, providing high output where space is limited.

7

7 YEAR WARRANTY*

USAGE GUIDE

	CLOSED BOX	REFLEX BOX	SCOOP LOADING	HORN LOADING	SUBWOOFER	WOOFER	MID BASS	MIDRANGE	BASS GUITAR
DELTA PRO 8A AND B	✓	✓		✓			✓	✓	
KAPPA PRO 10A	✓	✓					✓	✓	
NEW KAPPA PRO 10LF		✓		✓	✓	✓			✓
NEW LA10850	✓	✓		✓			✓	✓	
DEFINIMAX 4012HO	✓	✓	✓	✓	✓	✓	✓		✓
DELTA PRO 12A	✓	✓		✓		✓	✓	✓	
NEW DELTA PRO 12-450		✓		✓		✓	✓		
IMPERO 12A	✓	✓	✓	✓	✓	✓	✓		✓
KAPPA PRO 12A	✓	✓	✓		✓	✓			
NEW LA12850		✓		✓		✓	✓		
LAB 12	✓	✓		✓	✓				
DEFINIMAX 4015LF	✓	✓	✓	✓	✓	✓			✓
DELTA PRO 15A	✓	✓		✓		✓	✓		
IMPERO 15A AND C	✓	✓	✓	✓	✓	✓			✓
KAPPA PRO 15A AND B	✓		✓		✓	✓			✓
KAPPA PRO 15LF-2	✓	✓	✓	✓	✓				✓
KILOMAX PRO 15A	✓	✓	✓	✓	✓				
NEW LA15850		✓	✓	✓	✓	✓	✓		
LAB 15	✓	✓		✓	✓				
OMEGA PRO 15A	✓	✓	✓		✓	✓			
DEFINIMAX 4018LF	✓	✓	✓	✓	✓				
DELTA PRO 18A AND C	✓	✓	✓	✓	✓				
IMPERO 18A AND C	✓	✓	✓	✓	✓				✓
KILOMAX PRO 18A	✓	✓			✓	✓			
OMEGA PRO 18A AND C	✓	✓	✓	✓	✓				
SIGMA PRO 18A	✓	✓	✓	✓	✓				

A = 8 Ω | B=16 Ω | C=4 Ω | Refer to each product's detail page for alternate impedances.

*Warranty policy may vary outside of the continental United States and Canada. Check with your local distributor for warranty details.

PROFESSIONAL SERIES

DELTA PRO-8A

High sensitivity midrange driver for pro audio or MI. Truncated cast aluminum heat sink style basket is great for stacking in a line array.



SPECIFICATION

Nominal Basket Diameter	8.0", 203 mm
Nominal Impedance*	8 or 16 Ω
Power Rating**	
Watts	225 W
Music Program	450 W
Resonance	69 Hz
Usable Frequency Range	100 Hz – 3.0 kHz
Sensitivity***	97.8 dB
Magnet Weight	59 oz.
Gap Height	.310", 7.9 mm
Voice Coil Diameter	2.0", 51 mm

THIELE & SMALL PARAMETERS*

Fs	69 Hz
Re	5.40 Ω
Le	0.82 mH
Qms	6.43
Qes	0.22
Qts	0.22
Vas	0.65 cu.ft., 18.32 liters
Vd	66.0 cc
Cms	0.28 mm/N
BL	14.10 T-M
Mms	19 grams
EBP	307
Xmax	3.00 mm
Sd	218.2 cm ²
Xlim	7.0 mm

MOUNTING INFORMATION

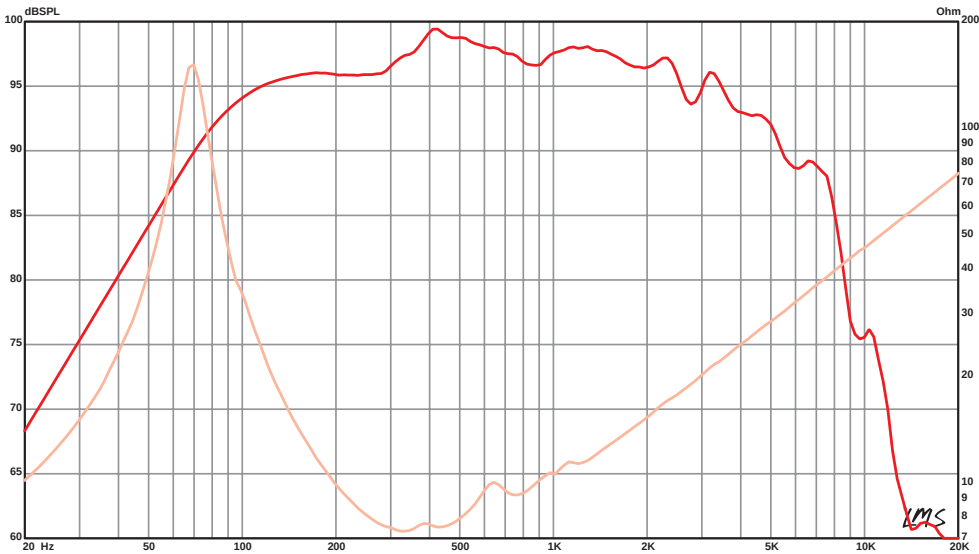
Recommended Enclosure Volume	
Sealed	8.00–16.00 liters, 0.30–0.60 cu.ft.
Vented	10.00–16.00 liters, 0.40–0.60 cu.ft.
Driver Volume Displaced	0.037 cu.ft., 1.04 liters
Overall Diameter	8.02", 203.7 mm
Baffle Hole Diameter	7.36", 186.9 mm
Front Sealing Gasket	Yes
Rear Sealing Gasket	Yes
Mounting Holes Diameter	0.28", 7.1 mm
Mounting Holes B.C.D.	8.60", 218.4 mm
Depth	3.75", 95.3 mm
Net Weight	10.00 lbs, 4.54 kg
Shipping Weight	11.00 lbs, 4.99 kg

MATERIALS OF CONSTRUCTION

- Copper voice coil
- Polyimide former
- Ferrite magnet
- Vented and extended core
- Die-cast aluminum basket
- Paper cone
- Cloth cone edge
- Solid composition paper dust cap



FREQUENCY RESPONSE & IMPEDANCE CURVE*



* See footnotes on page 83 for information regarding usable frequency range, nominal impedance, power rating and sensitivity.

PROFESSIONAL SERIES

KAPPA PRO-10LF

An enhanced low frequency version of the Kappa Pro 10. Excels in very compact vented or horn loaded bass guitar or subwoofer enclosures.



SPECIFICATION

Nominal Basket Diameter	10.0", 254 mm
Nominal Impedance*	8 Ω
Power Rating**	
Watts	600 W
Music Program	1200 W
Resonance	39 Hz
Usable Frequency Range	47 Hz – 2.0 kHz
Sensitivity***	91.6 dB
Magnet Weight	105 oz.
Gap Height	.375", 9.5 mm
Voice Coil Diameter	3.0", 76 mm

THIELE & SMALL PARAMETERS*

Fs	39 Hz
Re	5.47 Ω
Le	0.97 mH
Qms	8.97
Qes	0.29
Qts	0.28
Vas	2.58 cu.ft., 72.97 liters
Vd	271.4 cc
Cms	0.37 mm/N
BL	14.46 T-M
Mms	46 grams
EBP	132
Xmax	7.20 mm
Sd	376.9 cm ²
Xlim	16.0 mm

MOUNTING INFORMATION

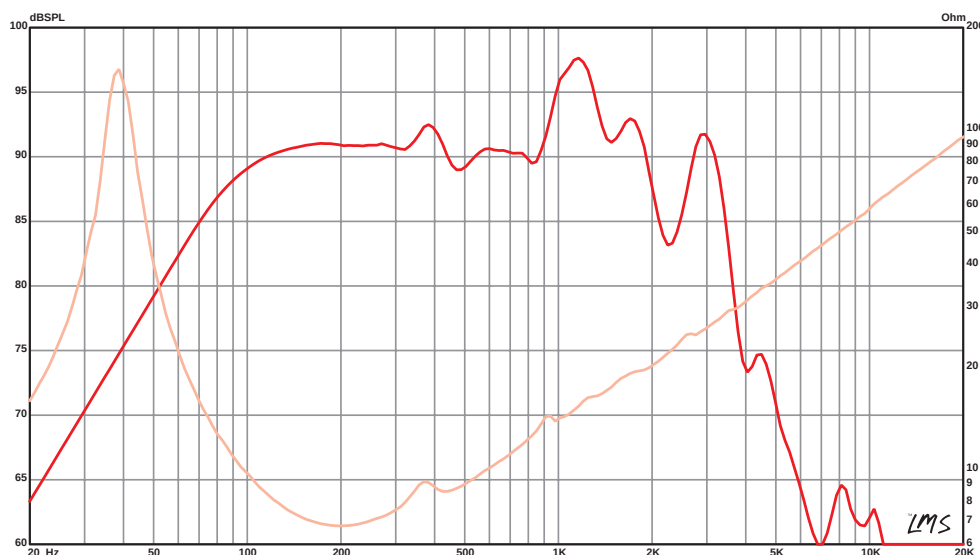
Recommended Enclosure Volume	
Sealed	N/A
Vented	25.49–49.55 liters, 0.90–1.75 cu.ft.
Driver Volume Displaced	0.067 cu.ft., 1.90 liters
Overall Diameter	10.27", 260.9 mm
Baffle Hole Diameter	9.14", 232.2 mm
Front Sealing Gasket	Yes
Rear Sealing Gasket	Yes
Mounting Holes Diameter	0.28", 7.1 mm
Mounting Holes B.C.D.	9.75", 247.7 mm
Depth	5.00", 127.0 mm
Net Weight	17.20 lbs, 7.80 kg
Shipping Weight	18.35 lbs, 8.32 kg

MATERIALS OF CONSTRUCTION

Aluminum voice coil
Polyimide former
Ferrite magnet
Vented and extended core
Die-cast aluminum basket
Treated paper cone
Paper cone edge
Treated Paper dust cap



FREQUENCY RESPONSE & IMPEDANCE CURVE*



* See footnotes on page 83 for information regarding usable frequency range, nominal impedance, power rating and sensitivity.

PROFESSIONAL SERIES

KAPPA PRO-10A

Recommended for pro audio in a sealed midrange, vented mid-bass, and bass enclosure.



SPECIFICATION

Nominal Basket Diameter	10.0", 254 mm
Nominal Impedance*	8 Ω
Power Rating**	
Watts	500 W
Music Program	1000 W
Resonance	46 Hz
Usable Frequency Range	102 Hz – 2.0 kHz
Sensitivity***	97.0 dB
Magnet Weight	80 oz.
Gap Height	.375", 9.5 mm
Voice Coil Diameter	3.0", 76 mm

THIELE & SMALL PARAMETERS*

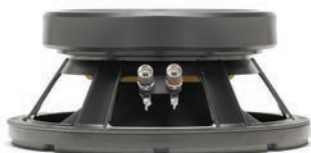
Fs	46 Hz
Re	6.50 Ω
Le	1.15 mH
Qms	10.10
Qes	0.20
Qts	0.20
Vas	1.80 cu.ft., 52.20 liters
Vd	110.0 cc
Cms	0.31 mm/N
BL	18.80 T-M
Mms	38 grams
EBP	230
Xmax	3.20 mm
Sd	344.9 cm ²
Xlim	10.9 mm

MOUNTING INFORMATION

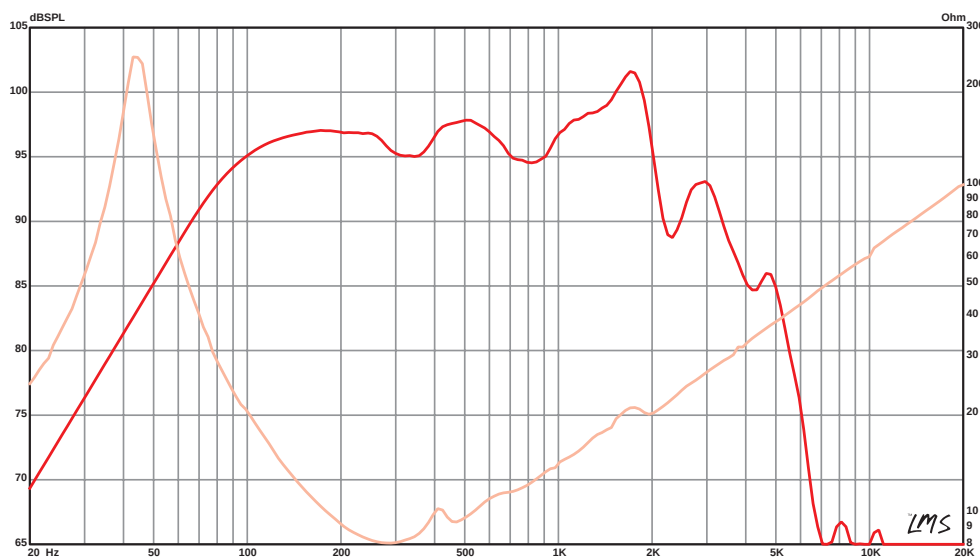
Recommended Enclosure Volume	
Sealed	7.00–9.90 liters, 0.25–0.35 cu.ft.
Vented	12.00–28.00 liters, 0.43–1.00 cu.ft.
Driver Volume Displaced	0.061 cu.ft., 1.72 liters
Overall Diameter	10.25", 260.4 mm
Baffle Hole Diameter	9.13", 231.9 mm
Front Sealing Gasket	Yes
Rear Sealing Gasket	Yes
Mounting Holes Diameter	0.27", 6.9 mm
Mounting Holes B.C.D.	9.75", 247.7 mm
Depth	4.33", 110.0 mm
Net Weight	15.30 lbs, 6.94 kg
Shipping Weight	16.40 lbs, 7.44 kg

MATERIALS OF CONSTRUCTION

Copper voice coil
Polyimide former
Ferrite magnet
Vented core
Die-cast aluminum basket
Paper cone
Cloth cone edge
Solid composition paper dust cap



FREQUENCY RESPONSE & IMPEDANCE CURVE*



* See footnotes on page 83 for information regarding usable frequency range, nominal impedance, power rating and sensitivity.

PROFESSIONAL SERIES

LA10850

A high power midrange driver in a shallow cast frame with an inverted dust cap for close placement to phase plugs used in many horn loaded designs. Also suitable as a high power mid/bass driver in small conventional vented enclosures, or as a high power midrange in very compact sealed enclosures.



SPECIFICATION

Nominal Basket Diameter	10.0", 254 mm
Nominal Impedance*	8 Ω
Power Rating**	
Watts	350 W
Music Program	700 W
Resonance	55 Hz
Usable Frequency Range	120 Hz – 4.3 kHz
Sensitivity***	98.7 dB
Magnet Weight	80 oz.
Gap Height	.375", 9.5 mm
Voice Coil Diameter	3.0", 76 mm

THIELE & SMALL PARAMETERS*

Fs	55 Hz
Re	5.13 Ω
Le	0.54 mH
Qms	9.09
Qes	0.26
Qts	0.25
Vas	2.04 cu.ft., 57.68 liters
Vd	106.2 cc
Cms	0.31 mm/N
BL	13.44 T-M
Mms	26 grams
EBP	212
Xmax	2.90 mm
Sd	366.1 cm ²
Xlim	10.4 mm

MOUNTING INFORMATION

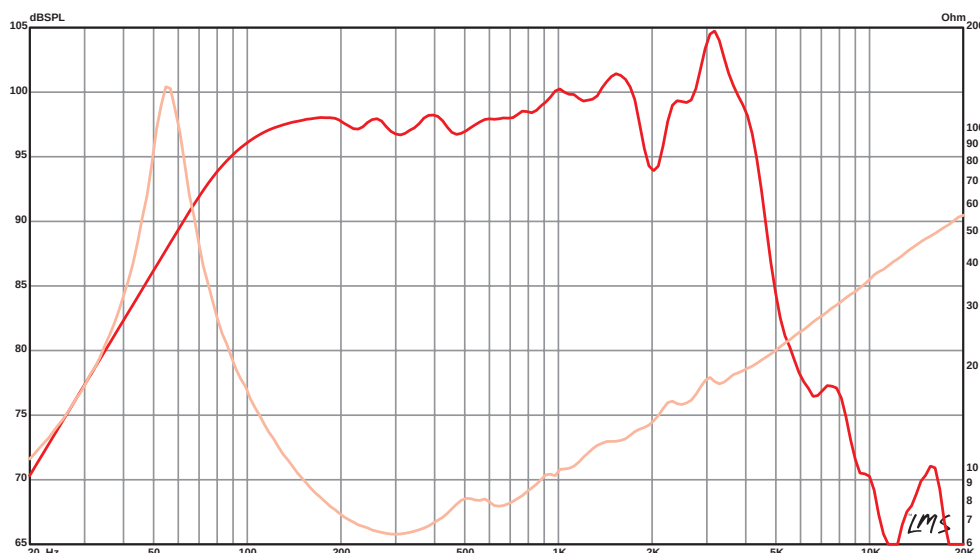
Recommended Enclosure Volume	
Sealed	15.57–33.98 liters, 0.55–1.20 cu.ft.
Vented	16.71–38.23 liters, 0.59–1.35 cu.ft.
Driver Volume Displaced	0.061 cu.ft., 1.72 liters
Overall Diameter	10.27", 260.9 mm
Baffle Hole Diameter	9.14", 232.2 mm
Front Sealing Gasket	Yes
Rear Sealing Gasket	Yes
Mounting Holes Diameter	0.28", 7.1 mm
Mounting Holes B.C.D.	9.75", 247.7 mm
Depth	4.50", 114.3 mm
Net Weight	15.00 lbs, 6.80 kg
Shipping Weight	16.15 lbs, 7.33 kg

MATERIALS OF CONSTRUCTION

Aluminum voice coil
Polyimide former
Ferrite magnet
Vented and extended core
Die-cast aluminum basket
Water resistant treated paper cone
Paper cone edge
Water resistant treated paper dust cap



FREQUENCY RESPONSE & IMPEDANCE CURVE*



* See footnotes on page 83 for information regarding usable frequency range, nominal impedance, power rating and sensitivity.

PROFESSIONAL SERIES

IMPERO™ 12A

High power driver recommended for pro audio in vented enclosures. Ideal for two-way top boxes, full-range two-way boxes, bass guitar boxes, and small subwoofers.



SPECIFICATION

Nominal Basket Diameter	12.0", 305 mm
Nominal Impedance*	8 Ω
Power Rating**	
Watts	1100 W
Music Program	2200 W
Resonance	43 Hz
Usable Frequency Range	56 Hz – 3.0 kHz
Sensitivity***	93.0 dB
Magnet Weight	109 oz.
Gap Height	.500", 12.7 mm
Voice Coil Diameter	4.0", 102 mm

THIELE & SMALL PARAMETERS*

Fs	43 Hz
Re	5.58 Ω
Le	1.46 mH
Qms	13.84
Qes	0.33
Qts	0.32
Vas	2.48 cu.ft., 70.20 liters
Vd	339.4 cc
Cms	0.17 mm/N
BL	19.49 T-M
Mms	83 grams
EBP	130
Xmax	6.22 mm
Sd	545.4 cm ²
Xlim	12.5 mm

MOUNTING INFORMATION

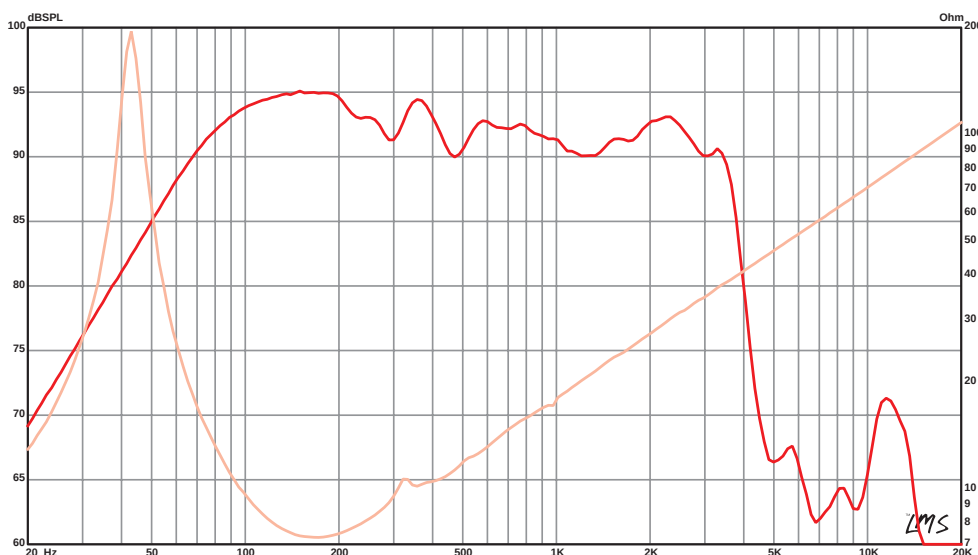
Recommended Enclosure Volume	
Sealed	N/A
Vented	33.98–118.93 liters, 1.20–4.20 cu.ft.
Driver Volume Displaced	0.106 cu.ft., 3.00 liters
Overall Diameter	12.38", 314.5 mm
Baffle Hole Diameter	11.06", 280.9 mm
Front Sealing Gasket	Yes
Rear Sealing Gasket	Yes
Mounting Holes Diameter	0.28", 7.1 mm
Mounting Holes B.C.D.	11.69", 296.9 mm
Depth	6.13", 155.7 mm
Net Weight	24.20 lbs , 10.98 kg
Shipping Weight	26.60 lbs , 12.07 kg

MATERIALS OF CONSTRUCTION

- Copper voice coil
- Fiberglass former
- Ferrite magnet
- Bumped Vented Extended core
- Die-cast aluminum basket
- Water resistant paper cone
- Treated cloth cone edge
- Water resistant treated paper dust cap



FREQUENCY RESPONSE & IMPEDANCE CURVE*



* See footnotes on page 83 for information regarding usable frequency range, nominal impedance, power rating and sensitivity.

PROFESSIONAL SERIES

LA12850

A high power 12" woofer in a shallow cast frame designed to work in ultra-compact vented systems and allow very tight packaging in line arrays or other systems where overall depth is limited.



SPECIFICATION

Nominal Basket Diameter	12.0", 305 mm
Nominal Impedance*	8 Ω
Power Rating**	
Watts	800 W
Music Program	1600 W
Resonance	46 Hz
Usable Frequency Range	63 Hz – 2.1 kHz
Sensitivity***	95.9 dB
Magnet Weight	109 oz.
Gap Height	.375", 9.5 mm
Voice Coil Diameter	4.0", 102 mm

THIELE & SMALL PARAMETERS*

Fs	46 Hz
Re	5.87 Ω
Le	0.96 mH
Qms	12.73
Qes	0.32
Qts	0.32
Vas	2.33 cu.ft., 66.07 liters
Vd	272.7 cc
Cms	0.16 mm/N
BL	19.51 T-M
Mms	73 grams
EBP	142
Xmax	5.00 mm
Sd	545.4 cm ²
Xlim	14.0 mm

MOUNTING INFORMATION

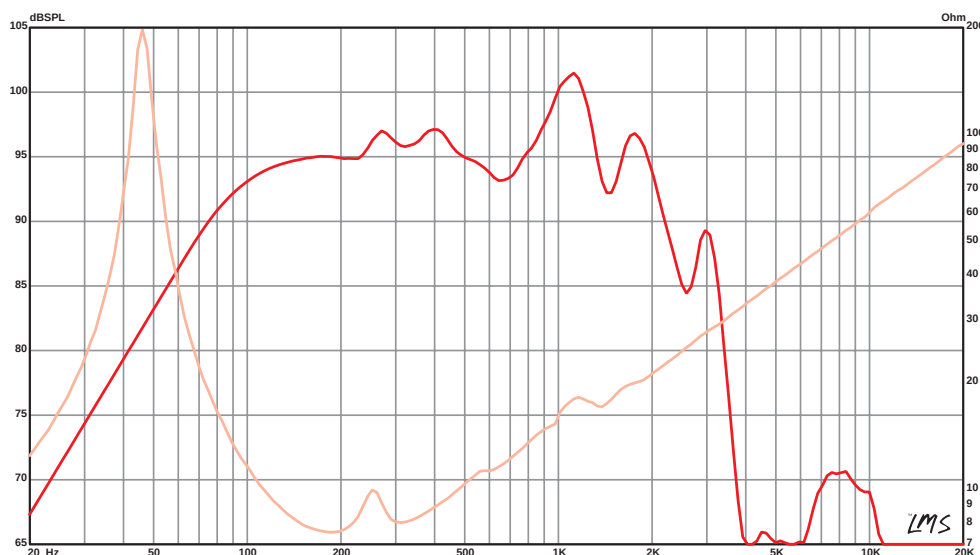
Recommended Enclosure Volume	
Sealed	– liters, 0.00– cu.ft.
Vented	31.15–77.87 liters, 1.10–2.75 cu.ft.
Driver Volume Displaced	0.102 cu.ft., 2.90 liters
Overall Diameter	12.32", 312.9 mm
Baffle Hole Diameter	11.08", 281.4 mm
Front Sealing Gasket	Yes
Rear Sealing Gasket	Yes
Mounting Holes Diameter	0.27", 6.8 mm
Mounting Holes B.C.D.	11.69", 297.0 mm
Depth	4.70", 119.4 mm
Net Weight	20.50 lbs, 9.30 kg
Shipping Weight	22.25 lbs, 10.09 kg

MATERIALS OF CONSTRUCTION

Copper voice coil
Polyimide former
Ferrite magnet
Core and Spider Land extended
Die-cast aluminum basket
Water resistant treated paper cone
Paper cone edge
Water resistant treated paper dust cap



FREQUENCY RESPONSE & IMPEDANCE CURVE*



* See footnotes on page 83 for information regarding usable frequency range, nominal impedance, power rating and sensitivity.

PROFESSIONAL SERIES

DEFINIMAX™ 4012H0

High output, low distortion mid-bass or woofer with a broad frequency response. Recommended for pro audio in both sealed and vented enclosures.



SPECIFICATION

Nominal Basket Diameter	12.0", 305 mm
Nominal Impedance*	8 Ω
Power Rating**	
Watts	600 W
Music Program	1200 W
Resonance	49 Hz
Usable Frequency Range	48 Hz – 2.6 kHz
Sensitivity***	96.2 dB
Magnet Weight	109 oz.
Gap Height	.375", 9.5 mm
Voice Coil Diameter	4.0", 102 mm

THIELE & SMALL PARAMETERS*

Fs	49 Hz
Re	5.81 Ω
Le	1.19 mH
Qms	11.07
Qes	0.34
Qts	0.33
Vas	1.90 cu.ft., 53.68 liters
Vd	338.2 cc
Cms	0.13 mm/N
BL	20.70 T-M
Mms	82 grams
EBP	144
Xmax	6.20 mm
Sd	545.4 cm ²
Xlim	11.2 mm

MOUNTING INFORMATION

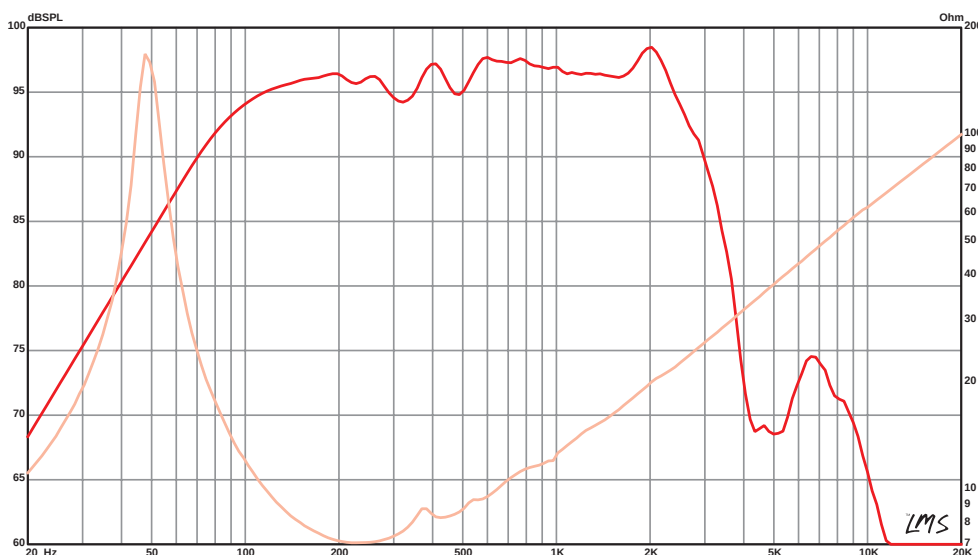
Recommended Enclosure Volume	
Sealed	25.49–42.48 liters, 0.90–1.50 cu.ft.
Vented	36.25–82.12 liters, 1.28–2.90 cu.ft.
Driver Volume Displaced	0.106 cu.ft., 3.00 liters
Overall Diameter	12.38", 314.5 mm
Baffle Hole Diameter	11.06", 280.9 mm
Front Sealing Gasket	Yes
Rear Sealing Gasket	Yes
Mounting Holes Diameter	0.27", 6.9 mm
Mounting Holes B.C.D.	11.69", 296.9 mm
Depth	5.32", 135.1 mm
Net Weight	22.50 lbs , 10.21 kg
Shipping Weight	24.80 lbs , 11.25 kg

MATERIALS OF CONSTRUCTION

- Edge wound copper voice coil
- Kapton former
- Ferrite magnet
- Undercut with aluminum shorting ring and Core
- Periphery Ventilation
- Die-cast aluminum basket
- Paper cone
- Cloth cone edge
- Treated Paper Pop-on dust cap



FREQUENCY RESPONSE & IMPEDANCE CURVE*



* See footnotes on page 83 for information regarding usable frequency range, nominal impedance, power rating and sensitivity.

PROFESSIONAL SERIES

KAPPA PRO-12A

High efficiency pro audio driver for vented mid-bass, and vented bass enclosures.



SPECIFICATION

Nominal Basket Diameter	12.0", 305 mm
Nominal Impedance*	8 Ω
Power Rating**	
Watts	500 W
Music Program	1000 W
Resonance	37 Hz
Usable Frequency Range	57 Hz – 2.8 kHz
Sensitivity***	97.1 dB
Magnet Weight	80 oz.
Gap Height	.375", 9.5 mm
Voice Coil Diameter	3.0", 76 mm

THIELE & SMALL PARAMETERS*

Fs	37 Hz
Re	5.46 Ω
Le	1.22 mH
Qms	6.93
Qes	0.25
Qts	0.24
Vas	4.30 cu.ft., 121.00 liters
Vd	249.0 cc
Cms	0.32 mm/N
BL	17.30 T-M
Mms	59 grams
EBP	148
Xmax	4.80 mm
Sd	519.5 cm ²
Xlim	14.8 mm

MOUNTING INFORMATION

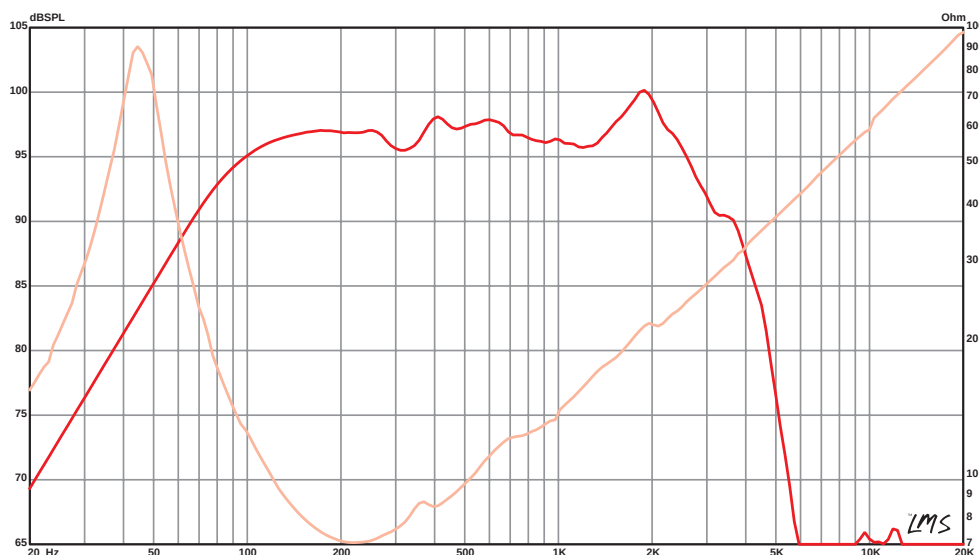
Recommended Enclosure Volume	
Sealed	N/A
Vented	17.00–34.00 liters, 0.60–1.20 cu.ft.
Driver Volume Displaced	0.090 cu.ft., 2.55 liters
Overall Diameter	12.38", 314.5 mm
Baffle Hole Diameter	11.07", 281.2 mm
Front Sealing Gasket	Yes
Rear Sealing Gasket	Yes
Mounting Holes Diameter	0.27", 6.9 mm
Mounting Holes B.C.D.	11.69", 296.9 mm
Depth	6.22", 158.0 mm
Net Weight	16.60 lbs, 7.53 kg
Shipping Weight	18.40 lbs, 8.35 kg

MATERIALS OF CONSTRUCTION

Copper voice coil
Polyimide former
Ferrite magnet
Vented core
Die-cast aluminum basket
Paper cone
Cloth cone edge
Solid composition paper dust cap



FREQUENCY RESPONSE & IMPEDANCE CURVE*



* See footnotes on page 83 for information regarding usable frequency range, nominal impedance, power rating and sensitivity.

PROFESSIONAL SERIES

LAB12

Recommended for vented, sealed, and horn loaded, professional audio enclosures as a subwoofer. Also great as a home hi-fi and automotive subwoofer.



SPECIFICATION

Nominal Basket Diameter	12.0", 305 mm
Nominal Impedance*	6 or 4 Ω
Power Rating**	
Watts	400 W
Music Program	800 W
Resonance	22 Hz
Usable Frequency Range	25 Hz – 0.1 kHz
Sensitivity***	89.2 dB
Magnet Weight	160 oz.
Gap Height	.375", 9.5 mm
Voice Coil Diameter	2.5", 64 mm

THIELE & SMALL PARAMETERS*

Fs	22 Hz
Re	4.29 Ω
Le	1.48 mH
Qms	13.32
Qes	0.39
Qts	0.38
Vas	4.42 cu.ft., 125.20 liters
Vd	659.0 cc
Cms	0.35 mm/N
BL	15.00 T-M
Mms	146 grams
EBP	56
Xmax	13.00 mm
Sd	506.7 cm2
Xlim	22.0 mm

MOUNTING INFORMATION

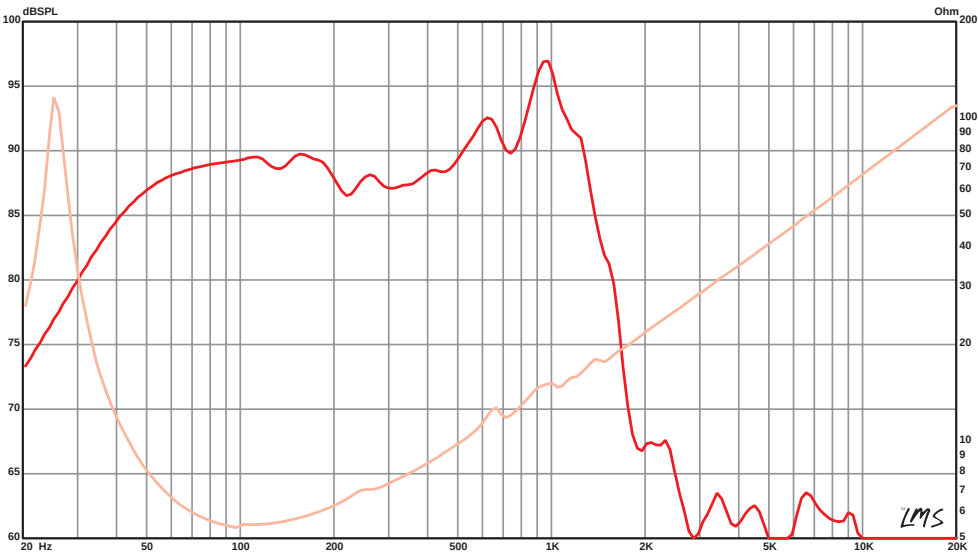
Recommended Enclosure Volume	
Sealed	22.70–28.30 liters, 0.80–1.00 cu.ft.
Vented	45.30–101.90 liters, 1.60–3.60 cu.ft.
Driver Volume Displaced	0.109 cu.ft., 3.09 liters
Overall Diameter	12.32", 312.9 mm
Baffle Hole Diameter	10.98", 278.9 mm
Front Sealing Gasket	Yes
Rear Sealing Gasket	N/A
Mounting Holes Diameter	0.26", 6.6 mm
Mounting Holes B.C.D.	11.77", 299.0 mm
Depth	6.44", 163.6 mm
Net Weight	22.00 lbs , 9.98 kg
Shipping Weight	23.80 lbs , 10.80 kg

MATERIALS OF CONSTRUCTION

- Copper voice coil
- Polyimide former
- Double stacked 80 oz. ferrite magnets
- Vented and extended core
- 12-spoke die-cast aluminum basket
- Kevlar-reinforced paper cone
- Foam cone edge
- Dual inverted dust caps



FREQUENCY RESPONSE & IMPEDANCE CURVE*



* See footnotes on page 83 for information regarding usable frequency range, nominal impedance, power rating and sensitivity.

PROFESSIONAL SERIES

DELTA PRO-12A

Recommended for professional audio in both sealed and vented enclosures. Ideal for full-range, mid/hi, and monitor wedges.



SPECIFICATION

Nominal Basket Diameter	12.0", 305 mm
Nominal Impedance*	8 Ω
Power Rating**	
Watts	400 W
Music Program	800 W
Resonance	51 Hz
Usable Frequency Range	52 Hz – 4.5 kHz
Sensitivity***	99.2 dB
Magnet Weight	80 oz.
Gap Height	.375", 9.5 mm
Voice Coil Diameter	2.5", 64 mm

THIELE & SMALL PARAMETERS*

Fs	51 Hz
Re	5.71 Ω
Le	0.84 mH
Qms	7.56
Qes	0.37
Qts	0.35
Vas	2.90 cu.ft., 81.70 liters
Vd	242.0 cc
Cms	0.21 mm/N
BL	15.30 T-M
Mms	48 grams
EBP	138
Xmax	4.60 mm
Sd	532.4 cm ²
Xlim	13.7 mm

MOUNTING INFORMATION

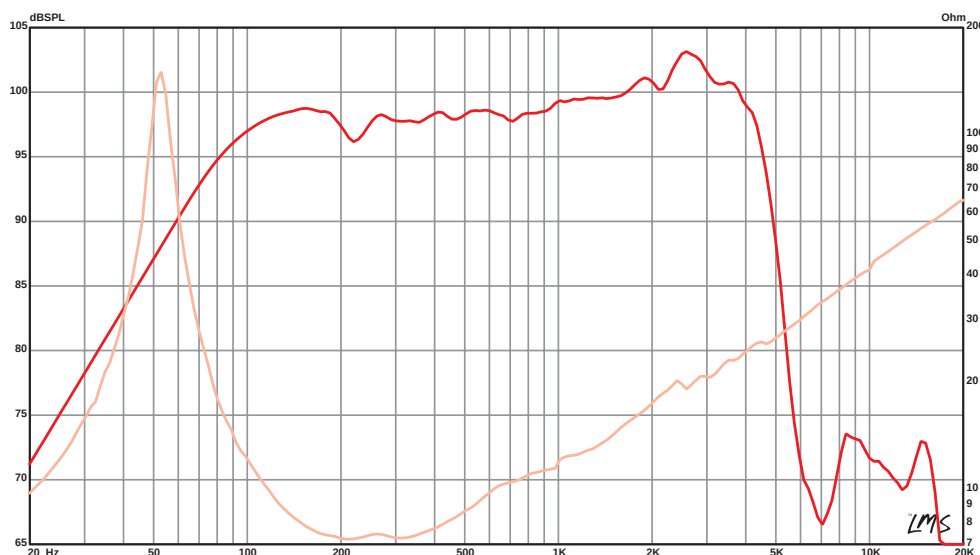
Recommended Enclosure Volume	
Sealed	28.00–35.00 liters, 1.00–1.25 cu.ft.
Vented	31.00–91.00 liters, 1.10–3.20 cu.ft.
Driver Volume Displaced	0.090 cu.ft., 2.55 liters
Overall Diameter	12.38", 314.5 mm
Baffle Hole Diameter	11.07", 281.2 mm
Front Sealing Gasket	Yes
Rear Sealing Gasket	Yes
Mounting Holes Diameter	0.27", 6.9 mm
Mounting Holes B.C.D.	11.69", 296.9 mm
Depth	6.22", 158.0 mm
Net Weight	16.30 lbs, 7.39 kg
Shipping Weight	18.00 lbs, 8.16 kg

MATERIALS OF CONSTRUCTION

Aluminum voice coil
Polyimide former
Ferrite magnet
Vented and extended core
Die-cast aluminum basket
Paper cone
Cloth cone edge
Solid composition paper dust cap



FREQUENCY RESPONSE & IMPEDANCE CURVE*



* See footnotes on page 83 for information regarding usable frequency range, nominal impedance, power rating and sensitivity.

PROFESSIONAL SERIES

DELTA PRO 12-450A

The Delta Pro 12-450 is a lighter weight version of the Delta Pro 12. Recommended as a woofer or mid/bass in vented enclosures and many portable PA cabinets.



SPECIFICATION

Nominal Basket Diameter	12.0", 305 mm
Nominal Impedance*	8 Ω
Power Rating**	
Watts	375 W
Music Program	750 W
Resonance	44 Hz
Usable Frequency Range	44 Hz – 4.0 kHz
Sensitivity***	99.8 dB
Magnet Weight	56 oz.
Gap Height	.313", 7.9 mm
Voice Coil Diameter	2.5", 64 mm

THIELE & SMALL PARAMETERS*

Fs	44 Hz
Re	5.04 Ω
Le	0.54 mH
Qms	7.59
Qes	0.39
Qts	0.37
Vas	5.00 cu.ft., 141.66 liters
Vd	271.5 cc
Cms	0.36 mm/N
BL	11.47 T-M
Mms	36 grams
EBP	115
Xmax	5.10 mm
Sd	532.4 cm ²
Xlim	13.7 mm

MOUNTING INFORMATION

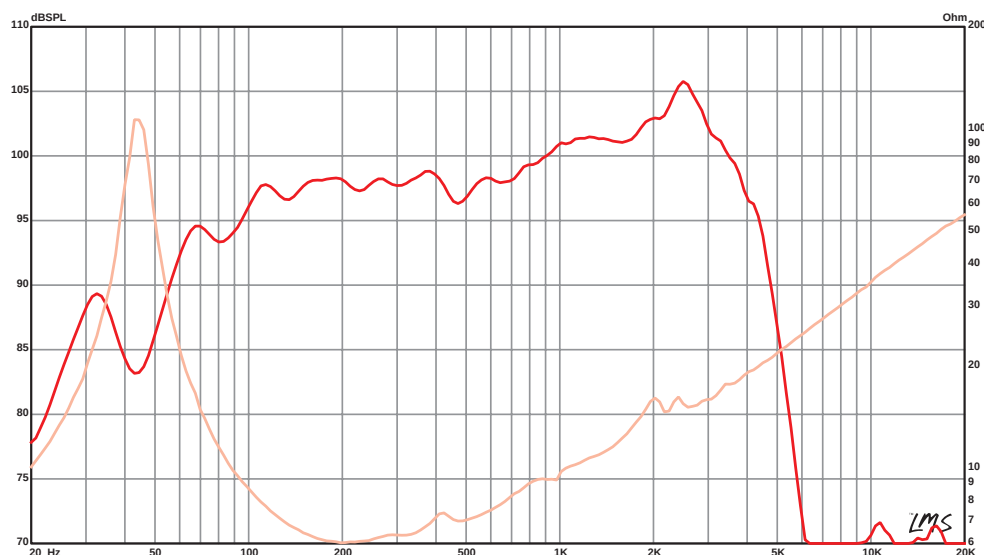
Recommended Enclosure Volume	
Sealed	N/A
Vented	36.81–93.45 liters, 1.30–3.50 cu.ft.
Driver Volume Displaced	0.079 cu.ft., 2.25 liters
Overall Diameter	12.38", 314.5 mm
Baffle Hole Diameter	11.07", 281.2 mm
Front Sealing Gasket	Yes
Rear Sealing Gasket	Yes
Mounting Holes Diameter	0.27", 6.9 mm
Mounting Holes B.C.D.	11.57", 293.9 mm
Depth	5.50", 139.7 mm
Net Weight	11.70 lbs, 5.31 kg
Shipping Weight	14.00 lbs, 6.35 kg

MATERIALS OF CONSTRUCTION

Aluminum voice coil
Polyimide former
Ferrite magnet
Vented and extended core
Die-cast aluminum basket
Paper cone
Cloth cone edge
Paper dust cap



FREQUENCY RESPONSE & IMPEDANCE CURVE*



* See footnotes on page 83 for information regarding usable frequency range, nominal impedance, power rating and sensitivity.

PROFESSIONAL SERIES

KILOMAX® PRO 15A

Recommended for professional audio subwoofer and woofer applications in vented enclosures.



SPECIFICATION

Nominal Basket Diameter	15.0", 381 mm
Nominal Impedance*	8 Ω
Power Rating**	
Watts	1250 W
Music Program	2500 W
Resonance	41 Hz
Usable Frequency Range	44 Hz – 0.8 kHz
Sensitivity***	95.5 dB
Magnet Weight	109 oz.
Gap Height	.375", 9.5 mm
Voice Coil Diameter	4.0", 102 mm

THIELE & SMALL PARAMETERS*

Fs	41 Hz
Re	4.97 Ω
Le	1.78 mH
Qms	8.80
Qes	0.40
Qts	0.39
Vas	5.50 cu.ft., 154.50 liters
Vd	677.0 cc
Cms	0.15 mm/N
BL	17.70 T-M
Mms	98 grams
EBP	103
Xmax	7.90 mm
Sd	856.3 cm2
Xlim	13.5 mm

MOUNTING INFORMATION

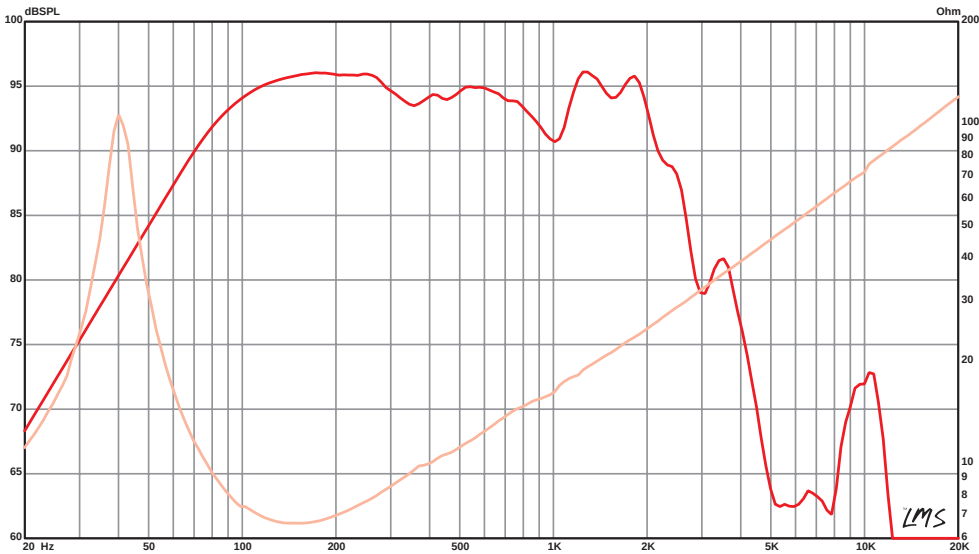
Recommended Enclosure Volume	
Sealed	N/A
Vented	82.00–176.00 liters, 2.90–6.20 cu.ft.
Driver Volume Displaced	0.152 cu.ft., 4.31 liters
Overall Diameter	15.21", 386.3 mm
Baffle Hole Diameter	14.00", 355.6 mm
Front Sealing Gasket	Yes
Rear Sealing Gasket	Yes
Mounting Holes Diameter	0.28", 7.1 mm
Mounting Holes B.C.D.	14.56", 369.8 mm
Depth	6.42", 163.1 mm
Net Weight	24.70 lbs , 11.20 kg
Shipping Weight	27.10 lbs , 12.29 kg

MATERIALS OF CONSTRUCTION

- Copper voice coil
- Polyimide former
- Ferrite magnet
- Extended core with Core Periphery Ventilation
- Die-cast aluminum basket
- Paper cone
- Cloth cone edge
- Porous cloth top spider/ heatsink



FREQUENCY RESPONSE & IMPEDANCE CURVE*



* See footnotes on page 83 for information regarding usable frequency range, nominal impedance, power rating and sensitivity.

PROFESSIONAL SERIES

IMPERO™ 15A

High power driver recommended for pro audio in vented enclosures. Suited for two-way top boxes, full-range two-way and three-way boxes, bass guitar boxes, and small subwoofers.



SPECIFICATION

Nominal Basket Diameter	15.0", 381 mm
Nominal Impedance*	8 or 4 Ω
Power Rating**	
Watts	1200 W
Music Program	2400 W
Resonance	43 Hz
Usable Frequency Range	46 Hz – 2.0 kHz
Sensitivity***	95.6 dB
Magnet Weight	109 oz.
Gap Height	.500", 12.7 mm
Voice Coil Diameter	4.0", 102 mm

THIELE & SMALL PARAMETERS*

Fs	43 Hz
Re	5.42 Ω
Le	1.47 mH
Qms	15.33
Qes	0.40
Qts	0.39
Vas	5.03 cu.ft., 142.51 liters
Vd	625.1 cc
Cms	0.14 mm/N
BL	19.18 T-M
Mms	101 grams
EBP	107
Xmax	7.30 mm
Sd	856.3 cm ²
Xlim	15.4 mm

MOUNTING INFORMATION

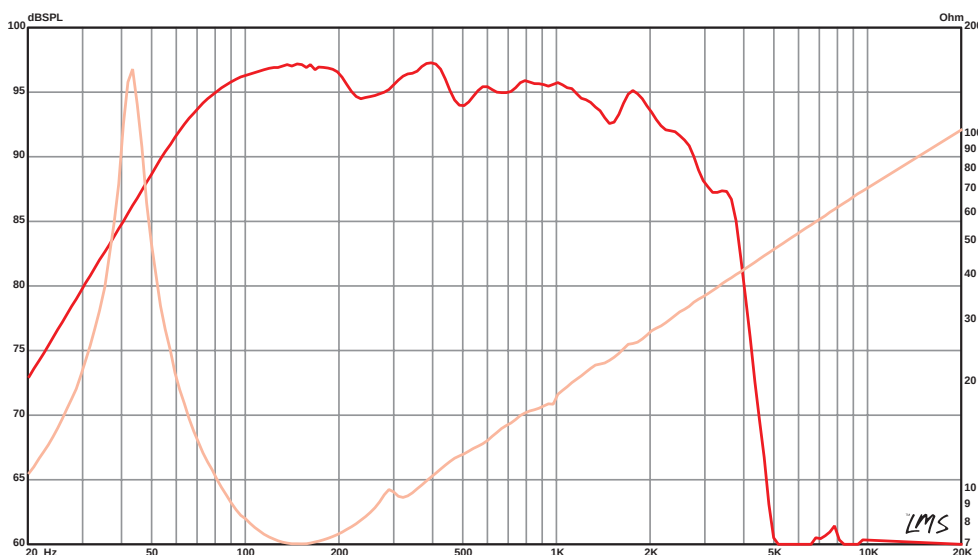
Recommended Enclosure Volume	
Sealed	N/A
Vented	53.80–184.06 liters, 1.90–6.50 cu.ft.
Driver Volume Displaced	0.155 cu.ft., 4.40 liters
Overall Diameter	15.22", 386.6 mm
Baffle Hole Diameter	13.99", 355.4 mm
Front Sealing Gasket	Yes
Rear Sealing Gasket	Yes
Mounting Holes Diameter	0.28", 7.1 mm
Mounting Holes B.C.D.	14.56", 369.8 mm
Depth	6.56", 166.6 mm
Net Weight	24.80 lbs , 11.25 kg
Shipping Weight	27.50 lbs , 12.47 kg

MATERIALS OF CONSTRUCTION

Copper voice coil
Fiberglass former
Ferrite magnet
Bumped Vented Extended core
Die-cast aluminum basket
Water resistant paper cone
Treated cloth cone edge
Water resistant treated paper dust cap



FREQUENCY RESPONSE & IMPEDANCE CURVE*



* See footnotes on page 83 for information regarding usable frequency range, nominal impedance, power rating and sensitivity.

PROFESSIONAL SERIES

LA15850

Shallow 15" high power cast frame woofer with a 4" voice coil and super strong cone body. The inverted dust cap allows close placement to phase plugs used in many horn loaded designs. Also works well in small vented designs when a high power mid/bass is needed.

NEW



SPECIFICATION

Nominal Basket Diameter	15.0", 381 mm
Nominal Impedance*	8 Ω
Power Rating**	
Watts	800 W
Music Program	1600 W
Resonance	34 Hz
Usable Frequency Range	45 Hz – 1.5 kHz
Sensitivity***	96.2 dB
Magnet Weight	109 oz.
Gap Height	.375", 9.5 mm
Voice Coil Diameter	4.0", 102 mm

THIELE & SMALL PARAMETERS*

Fs	34 Hz
Re	5.83 Ω
Le	1.00 mH
Qms	9.27
Qes	0.34
Qts	0.33
Vas	8.27 cu.ft., 234.15 liters
Vd	351.1 cc
Cms	0.23 mm/N
BL	18.98 T-M
Mms	98 grams
EBP	100
Xmax	4.10 mm
Sd	856.3 cm ²
Xlim	12.2 mm

MOUNTING INFORMATION

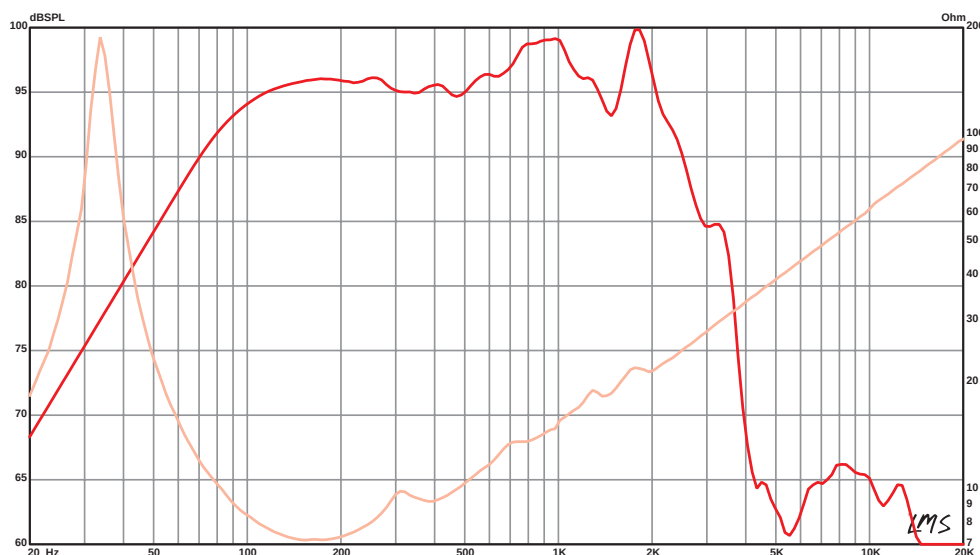
Recommended Enclosure Volume	
Sealed	N/A
Vented	46.72–127.43 liters, 1.65–4.50 cu.ft.
Driver Volume Displaced	0.145 cu.ft., 4.10 liters
Overall Diameter	15.30", 388.6 mm
Baffle Hole Diameter	14.08", 357.6 mm
Front Sealing Gasket	Yes
Rear Sealing Gasket	Yes
Mounting Holes Diameter	0.26", 6.5 mm
Mounting Holes B.C.D.	14.57", 370.1 mm
Depth	5.50", 139.7 mm
Net Weight	21.40 lbs, 9.71 kg
Shipping Weight	23.60 lbs, 10.70 kg

MATERIALS OF CONSTRUCTION

Copper voice coil
Polyimide former
Ferrite magnet
Core and Spider Land extended
Die-cast aluminum basket
Water resistant treated paper cone
Paper cone edge
Water resistant treated paper dust cap



FREQUENCY RESPONSE & IMPEDANCE CURVE*



* See footnotes on page 83 for information regarding usable frequency range, nominal impedance, power rating and sensitivity.

PROFESSIONAL SERIES

OMEGA PRO-15A

High power driver for pro audio as a woofer in vented enclosures. Also suitable for horn loading and scoops.



SPECIFICATION

Nominal Basket Diameter	15.0", 381 mm
Nominal Impedance*	8 Ω
Power Rating**	
Watts	800 W
Music Program	1600 W
Resonance	33 Hz
Usable Frequency Range	51 Hz – 1.7 kHz
Sensitivity***	97.3 dB
Magnet Weight	109 oz.
Gap Height	.375", 9.5 mm
Voice Coil Diameter	4.0", 102 mm

THIELE & SMALL PARAMETERS*

Fs	33 Hz
Re	5.28 Ω
Le	1.04 mH
Qms	5.69
Qes	0.33
Qts	0.32
Vas	9.10 cu.ft., 258.50 liters
Vd	411.0 cc
Cms	0.25 mm/N
BL	17.50 T-M
Mms	94 grams
EBP	99
Xmax	4.80 mm
Sd	856.3 cm ²
Xlim	12.2 mm

MOUNTING INFORMATION

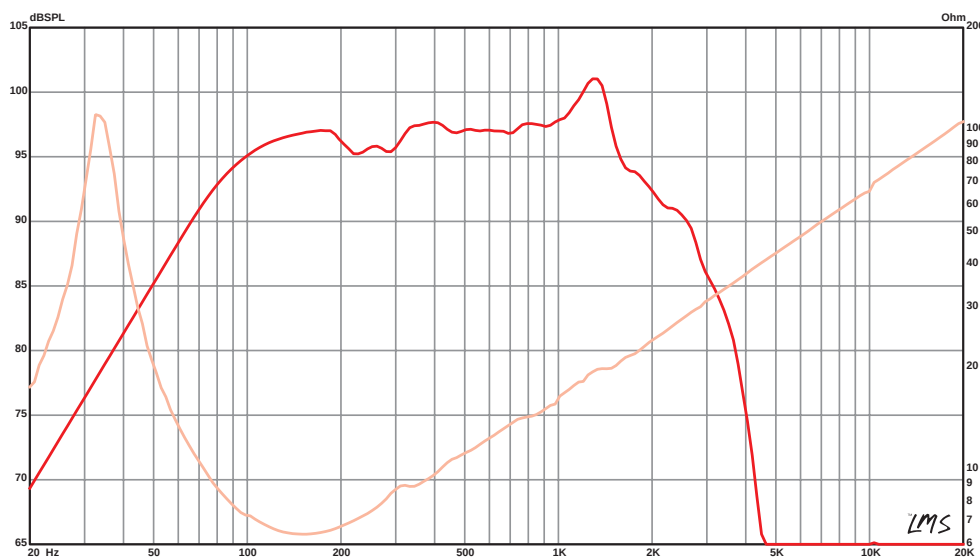
Recommended Enclosure Volume	
Sealed	N/A
Vented	57.00–108.00 liters, 2.00–3.80 cu.ft.
Driver Volume Displaced	0.152 cu.ft., 4.31 liters
Overall Diameter	15.21", 386.3 mm
Baffle Hole Diameter	14.00", 355.6 mm
Front Sealing Gasket	Yes
Rear Sealing Gasket	Yes
Mounting Holes Diameter	0.28", 7.1 mm
Mounting Holes B.C.D.	14.56", 369.8 mm
Depth	6.35", 161.3 mm
Net Weight	22.70 lbs , 10.30 kg
Shipping Weight	25.20 lbs , 11.43 kg

MATERIALS OF CONSTRUCTION

Copper voice coil
Polyimide former
Ferrite magnet
Vented and extended core
Die-cast aluminum basket
Paper cone
Cloth cone edge
Solid composition paper dust cap



FREQUENCY RESPONSE & IMPEDANCE CURVE*



* See footnotes on page 83 for information regarding usable frequency range, nominal impedance, power rating and sensitivity.

PROFESSIONAL SERIES

DEFINIMAX™ 4015LF

Recommended for professional audio and bass guitar as a low distortion woofer or subwoofer in vented enclosures. Also works in a sealed enclosure for bass guitar.



SPECIFICATION

Nominal Basket Diameter	15.0", 381 mm
Nominal Impedance*	8 Ω
Power Rating**	
Watts	700 W
Music Program	1400 W
Resonance	42 Hz
Usable Frequency Range	35 Hz – 1.2 kHz
Sensitivity***	96.0 dB
Magnet Weight	109 oz.
Gap Height	.375", 9.5 mm
Voice Coil Diameter	4.0", 102 mm

THIELE & SMALL PARAMETERS*

Fs	42 Hz
Re	5.04 Ω
Le	1.49 mH
Qms	6.73
Qes	0.54
Qts	0.50
Vas	4.10 cu.ft., 115.50 liters
Vd	786.0 cc
Cms	0.11 mm/N
BL	18.40 T-M
Mms	139 grams
EBP	77
Xmax	9.00 mm
Sd	872.9 cm ²
Xlim	15.5 mm

MOUNTING INFORMATION

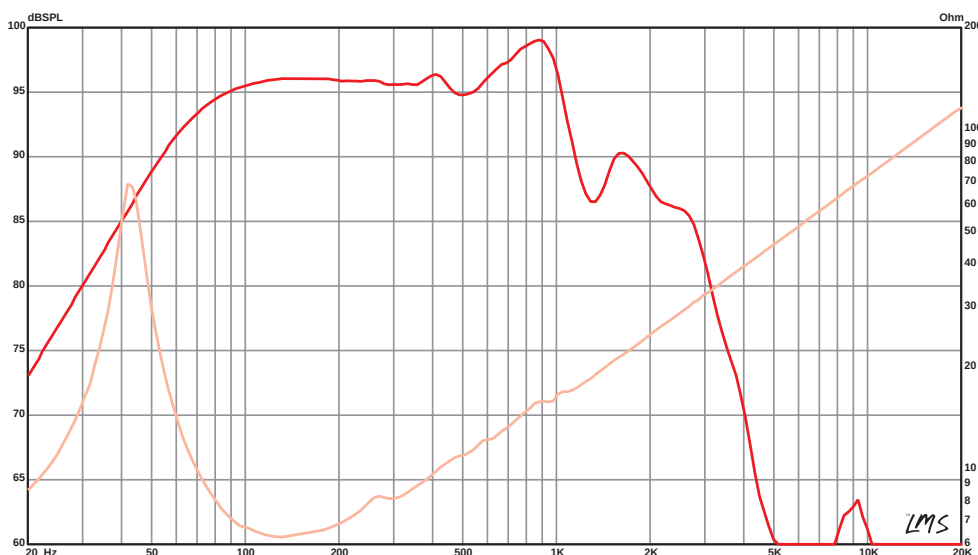
Recommended Enclosure Volume	
Sealed	48.00–57.00 liters, 1.70–2.00 cu.ft.
Vented	82.00–181.00 liters, 2.90–6.40 cu.ft.
Driver Volume Displaced	0.152 cu.ft., 4.31 liters
Overall Diameter	15.21", 386.3 mm
Baffle Hole Diameter	14.00", 355.6 mm
Front Sealing Gasket	Yes
Rear Sealing Gasket	Yes
Mounting Holes Diameter	0.28", 7.1 mm
Mounting Holes B.C.D.	14.56", 369.8 mm
Depth	6.56", 166.6 mm
Net Weight	23.70 lbs , 10.75 kg
Shipping Weight	26.00 lbs , 11.79 kg

MATERIALS OF CONSTRUCTION

Copper voice coil
Polyimide former
Ferrite magnet
Undercut with aluminum shorting ring and Core
Periphery Ventilation
Die-cast aluminum basket
Water resistant paper cone
Cloth cone edge
Water resistant treated paper dust cap



FREQUENCY RESPONSE & IMPEDANCE CURVE*



* See footnotes on page 83 for information regarding usable frequency range, nominal impedance, power rating and sensitivity.

PROFESSIONAL SERIES

LAB 15

Subwoofer suited for small vented boxes. Also suitable for horn loading. Great as a home hi-fi and automotive subwoofer.



SPECIFICATION

Nominal Basket Diameter	15.0", 381 mm
Nominal Impedance*	6 Ω
Power Rating**	
Watts	600 W
Music Program	1200 W
Resonance	28 Hz
Usable Frequency Range	20 Hz – 0.1 kHz
Sensitivity***	88.5 dB
Magnet Weight	160 oz.
Gap Height	.375", 9.5 mm
Voice Coil Diameter	3.0", 76 mm

THIELE & SMALL PARAMETERS*

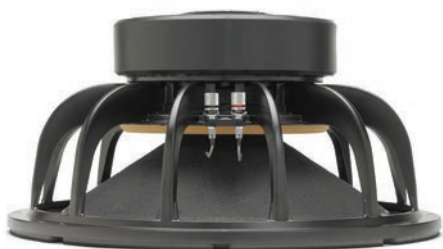
Fs	28 Hz
Re	4.90 Ω
Le	3.23 mH
Qms	5.36
Qes	0.37
Qts	0.35
Vas	3.70 cu.ft., 103.61 liters
Vd	968.0 cc
Cms	0.11 mm/N
BL	26.70 T-M
Mms	308 grams
EBP	75
Xmax	11.80 mm
Sd	823.7 cm ²
Xlim	22.0 mm

MOUNTING INFORMATION

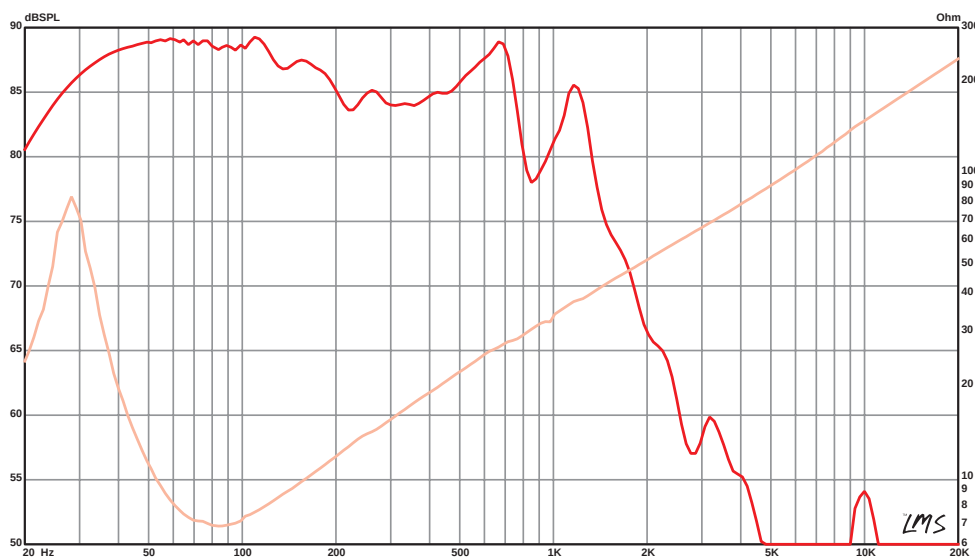
Recommended Enclosure Volume	
Sealed	35.00–108.00 liters, 1.20–3.80 cu.ft.
Vented	71.00–290.00 liters, 2.50–10.30 cu.ft.
Driver Volume Displaced	0.158 cu.ft., 4.46 liters
Overall Diameter	15.34", 389.6 mm
Baffle Hole Diameter	14.00", 355.6 mm
Front Sealing Gasket	Yes
Rear Sealing Gasket	N/A
Mounting Holes Diameter	0.26", 6.6 mm
Mounting Holes B.C.D.	14.70", 373.4 mm
Depth	7.75", 196.9 mm
Net Weight	23.80 lbs , 10.80 kg
Shipping Weight	26.00 lbs , 11.79 kg

MATERIALS OF CONSTRUCTION

Copper voice coil
Aluminum former
Double stacked 80 oz. ferrite magnets
Vented and extended core
Die-cast aluminum basket
Kevlar-reinforced paper cone
Foam cone edge
water resistant treated solid composition paper



FREQUENCY RESPONSE & IMPEDANCE CURVE*



* See footnotes on page 83 for information regarding usable frequency range, nominal impedance, power rating and sensitivity.

PROFESSIONAL SERIES

KAPPA PRO-15LF-2

Long throw, low frequency woofer recommended for pro audio in a vented bass enclosure.



SPECIFICATION

Nominal Basket Diameter	15.0", 381 mm
Nominal Impedance*	8 or 4 Ω
Power Rating**	
Watts	600 W
Music Program	1200 W
Resonance	35 Hz
Usable Frequency Range	38 Hz – 1.8 kHz
Sensitivity***	97.8 dB
Magnet Weight	120 oz.
Gap Height	.375", 9.5 mm
Voice Coil Diameter	3.0", 76 mm

THIELE & SMALL PARAMETERS*

Fs	35 Hz
Re	6.50 Ω
Le	1.40 mH
Qms	7.30
Qes	0.32
Qts	0.30
Vas	7.00 cu.ft., 198.80 liters
Vd	571.2 cc
Cms	0.20 mm/N
BL	21.60 T-M
Mms	102 grams
EBP	112
Xmax	6.70 mm
Sd	856.3 cm ²
Xlim	18.0 mm

MOUNTING INFORMATION

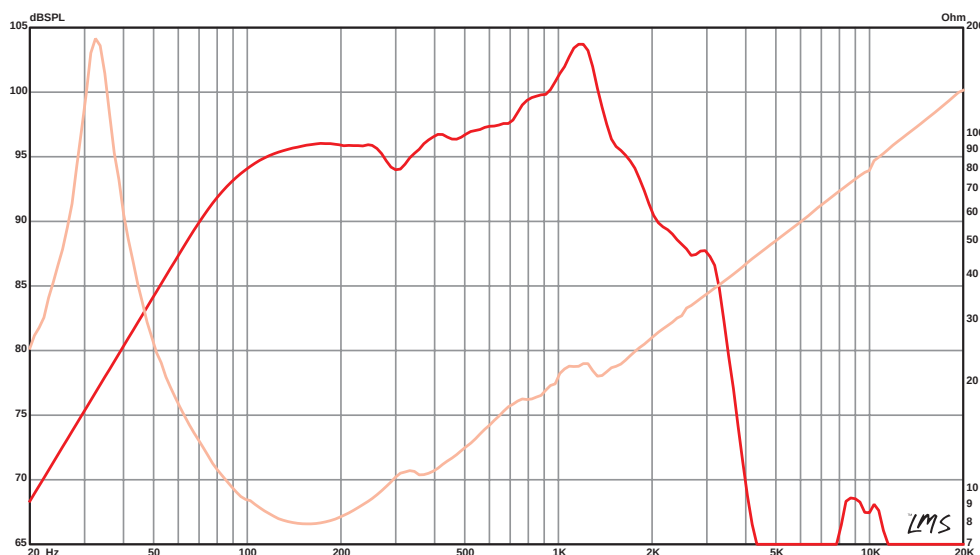
Recommended Enclosure Volume	
Sealed	N/A
Vented	76.50–164.00 liters, 2.70–5.80 cu.ft.
Driver Volume Displaced	0.152 cu.ft., 4.31 liters
Overall Diameter	15.21", 386.3 mm
Baffle Hole Diameter	14.00", 355.6 mm
Front Sealing Gasket	Yes
Rear Sealing Gasket	Yes
Mounting Holes Diameter	0.28", 7.1 mm
Mounting Holes B.C.D.	14.56", 369.8 mm
Depth	6.57", 166.9 mm
Net Weight	22.30 lbs , 10.12 kg
Shipping Weight	24.80 lbs , 11.25 kg

MATERIALS OF CONSTRUCTION

Copper voice coil
Polyimide former
Ferrite magnet
Vented and extended core
Die-cast aluminum basket
Paper cone
Cloth cone edge
Solid composition paper dust cap



FREQUENCY RESPONSE & IMPEDANCE CURVE*



* See footnotes on page 83 for information regarding usable frequency range, nominal impedance, power rating and sensitivity.

PROFESSIONAL SERIES

KAPPA PRO-15A

Recommended for professional audio in a vented mid-bass or bass enclosure.



SPECIFICATION

Nominal Basket Diameter	15.0", 381 mm
Nominal Impedance*	8 or 16 Ω
Power Rating**	
Watts	500 W
Music Program	1000 W
Resonance	47 Hz
Usable Frequency Range	46 Hz – 4.0 kHz
Sensitivity***	101.0 dB
Magnet Weight	80 oz.
Gap Height	.375", 9.5 mm
Voice Coil Diameter	3.0", 76 mm

THIELE & SMALL PARAMETERS*

Fs	47 Hz
Re	5.23 Ω
Le	1.01 mH
Qms	8.01
Qes	0.40
Qts	0.38
Vas	5.90 cu.ft., 167.70 liters
Vd	274.0 cc
Cms	0.16 mm/N
BL	16.60 T-M
Mms	72 grams
EBP	118
Xmax	3.20 mm
Sd	856.3 cm ²
Xlim	13.2 mm

MOUNTING INFORMATION

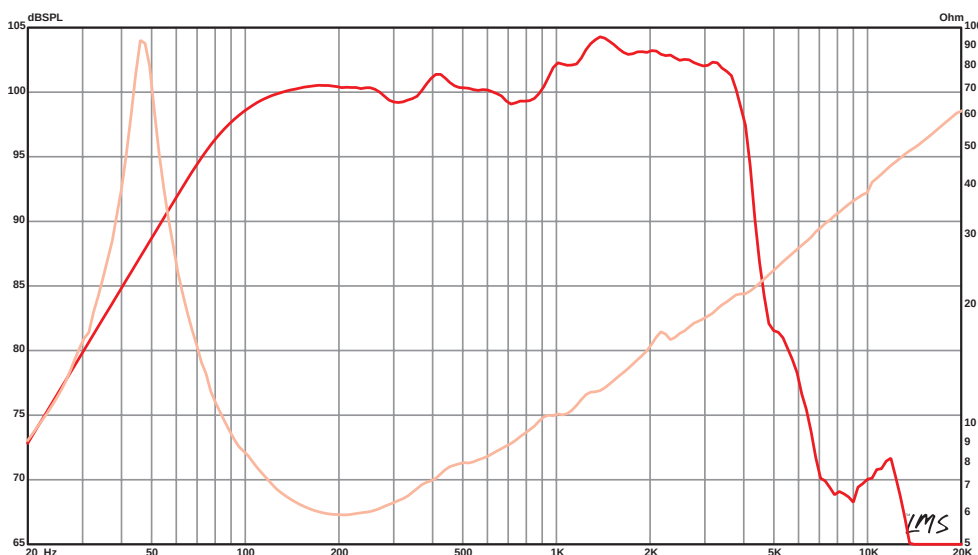
Recommended Enclosure Volume	
Sealed	N/A
Vented	54.00–184.00 liters, 1.90–6.50 cu.ft.
Driver Volume Displaced	0.138 cu.ft., 3.92 liters
Overall Diameter	15.32", 389.1 mm
Baffle Hole Diameter	14.00", 355.6 mm
Front Sealing Gasket	Yes
Rear Sealing Gasket	Yes
Mounting Holes Diameter	0.28", 7.1 mm
Mounting Holes B.C.D.	14.56", 369.8 mm
Depth	6.06", 153.9 mm
Net Weight	16.90 lbs, 7.67 kg
Shipping Weight	19.50 lbs, 8.85 kg

MATERIALS OF CONSTRUCTION

Aluminum voice coil
Polyimide former
Ferrite magnet
Vented core
Die-cast aluminum basket
Paper cone
Cloth cone edge
Solid composition paper dust cap



FREQUENCY RESPONSE & IMPEDANCE CURVE*



* See footnotes on page 83 for information regarding usable frequency range, nominal impedance, power rating and sensitivity.

PROFESSIONAL SERIES

DELTA PRO-15A

Recommended for professional audio in both sealed and vented enclosures. Ideal for full-range, mid/hi, and monitor wedges.



SPECIFICATION

Nominal Basket Diameter	15.0", 381 mm
Nominal Impedance*	8 Ω
Power Rating**	
Watts	400 W
Music Program	800 W
Resonance	42 Hz
Usable Frequency Range	54 Hz – 4.2 kHz
Sensitivity***	101.6 dB
Magnet Weight	80 oz.
Gap Height	.375", 9.5 mm
Voice Coil Diameter	2.5", 64 mm

THIELE & SMALL PARAMETERS*

Fs	42 Hz
Re	5.71 Ω
Le	0.83 mH
Qms	4.73
Qes	0.44
Qts	0.40
Vas	8.60 cu.ft., 243.50 liters
Vd	368.0 cc
Cms	0.24 mm/N
BL	14.50 T-M
Mms	61 grams
EBP	95
Xmax	4.30 mm
Sd	856.3 cm ²
Xlim	13.7 mm

MOUNTING INFORMATION

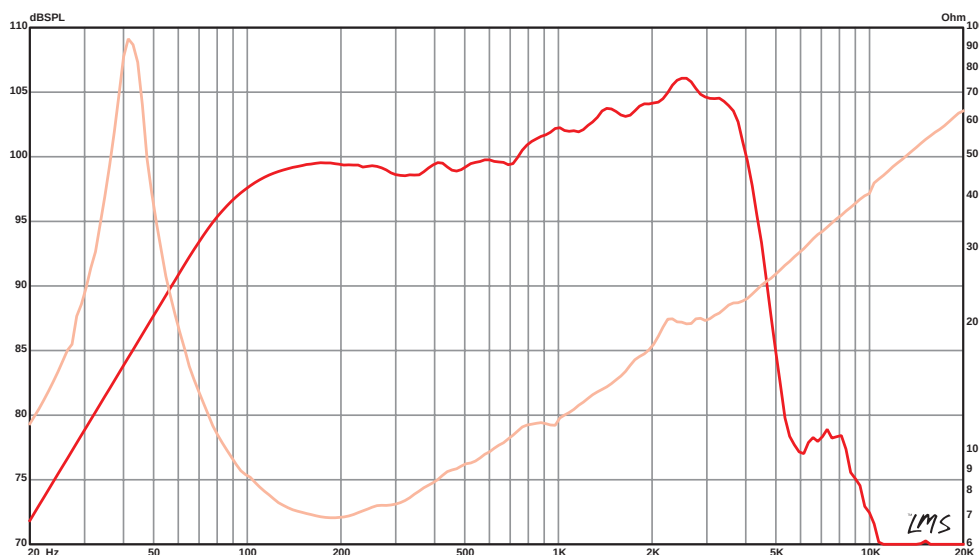
Recommended Enclosure Volume	
Sealed	28.00–42.50 liters, 1.00–1.50 cu.ft.
Vented	57.00–133.00 liters, 2.00–4.70 cu.ft.
Driver Volume Displaced	0.138 cu.ft., 3.92 liters
Overall Diameter	15.32", 389.1 mm
Baffle Hole Diameter	14.00", 355.6 mm
Front Sealing Gasket	Yes
Rear Sealing Gasket	Yes
Mounting Holes Diameter	0.28", 7.1 mm
Mounting Holes B.C.D.	14.56", 369.8 mm
Depth	6.06", 153.9 mm
Net Weight	17.00 lbs, 7.71 kg
Shipping Weight	19.10 lbs, 8.66 kg

MATERIALS OF CONSTRUCTION

Aluminum voice coil
Polyimide former
Ferrite magnet
Vented and extended core
Die-cast aluminum basket
Paper cone
Cloth cone edge
Solid composition paper dust cap



FREQUENCY RESPONSE & IMPEDANCE CURVE*



* See footnotes on page 83 for information regarding usable frequency range, nominal impedance, power rating and sensitivity.

PROFESSIONAL SERIES

KILOMAX® PRO 18A

Recommended for professional audio subwoofer and woofer applications in sealed and vented enclosures. Not for horn-loading or scoops.



SPECIFICATION

Nominal Basket Diameter	18.0", 457 mm
Nominal Impedance*	8 Ω
Power Rating**	
Watts	1250 W
Music Program	2500 W
Resonance	32 Hz
Usable Frequency Range	33 Hz – 0.3 kHz
Sensitivity***	95.8 dB
Magnet Weight	109 oz.
Gap Height	.375", 9.5 mm
Voice Coil Diameter	4.0", 102 mm

THIELE & SMALL PARAMETERS*

Fs	32 Hz
Re	5.07 Ω
Le	1.59 mH
Qms	10.15
Qes	0.49
Qts	0.47
Vas	11.70 cu.ft., 331.50 liters
Vd	1159.0 cc
Cms	0.18 mm/N
BL	17.20 T-M
Mms	143 grams
EBP	65
Xmax	10.00 mm
Sd	1159.0 cm ²
Xlim	19.2 mm

MOUNTING INFORMATION

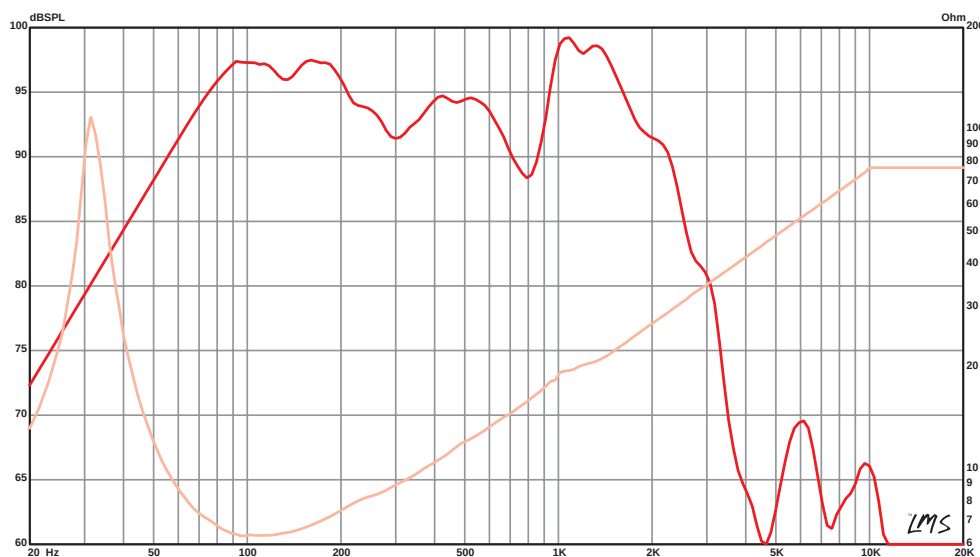
Recommended Enclosure Volume	
Sealed	104.80–172.70 liters, 3.70–6.10 cu.ft.
Vented	118.90–303.00 liters, 4.20–10.70 cu.ft.
Driver Volume Displaced	0.234 cu.ft., 6.62 liters
Overall Diameter	18.00", 457.2 mm
Baffle Hole Diameter	16.56", 420.6 mm
Front Sealing Gasket	Yes
Rear Sealing Gasket	Yes
Mounting Holes Diameter	0.28", 7.1 mm
Mounting Holes B.C.D.	17.25", 438.2 mm
Depth	8.15", 207.0 mm
Net Weight	27.40 lbs , 12.43 kg
Shipping Weight	30.90 lbs , 14.02 kg

MATERIALS OF CONSTRUCTION

Copper voice coil
Kapton former
Ferrite magnet
Extended core with Core Periphery Ventilation
Die-cast aluminum basket
Treated Paper-Kevlar
Cloth cone edge
Porous cloth top spider/ heatsink



FREQUENCY RESPONSE & IMPEDANCE CURVE*



* See footnotes on page 83 for information regarding usable frequency range, nominal impedance, power rating and sensitivity.

PROFESSIONAL SERIES

IMPERO™ 18A

High power driver recommended for pro audio in vented enclosures. Suited for full-range three-way boxes, bass guitar boxes, and small subwoofers.



SPECIFICATION

Nominal Basket Diameter	18.0", 457 mm
Nominal Impedance*	8 or 4 Ω
Power Rating**	
Watts	1200 W
Music Program	2400 W
Resonance	33 Hz
Usable Frequency Range	39 Hz – 0.8 kHz
Sensitivity***	95.9 dB
Magnet Weight	109 oz.
Gap Height	.500", 12.7 mm
Voice Coil Diameter	4.0", 102 mm

THIELE & SMALL PARAMETERS*

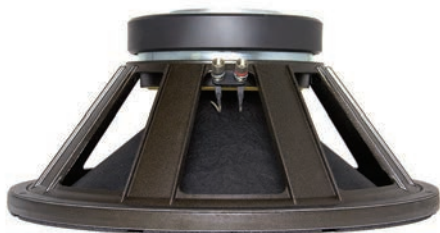
Fs	33 Hz
Re	5.41 Ω
Le	1.47 mH
Qms	14.02
Qes	0.44
Qts	0.43
Vas	11.19 cu.ft., 317.02 liters
Vd	927.2 cc
Cms	0.17 mm/N
BL	18.90 T-M
Mms	140 grams
EBP	75
Xmax	8.00 mm
Sd	1159.0 cm ²
Xlim	20.2 mm

MOUNTING INFORMATION

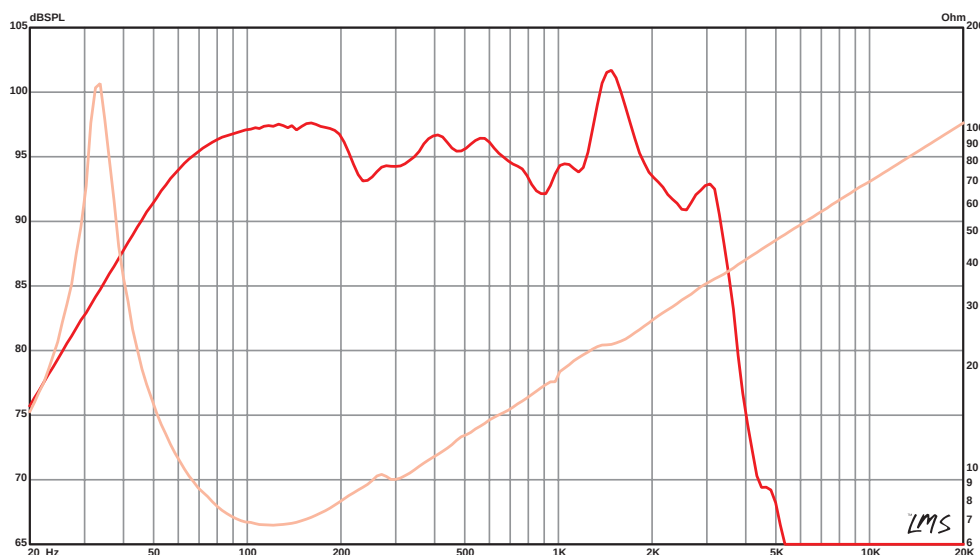
Recommended Enclosure Volume	
Sealed	N/A
Vented	113.27–277.51 liters, 4.00–9.80 cu.ft.
Driver Volume Displaced	0.237 cu.ft., 6.70 liters
Overall Diameter	18.00", 457.2 mm
Baffle Hole Diameter	16.56", 420.6 mm
Front Sealing Gasket	Yes
Rear Sealing Gasket	Yes
Mounting Holes Diameter	0.28", 7.1 mm
Mounting Holes B.C.D.	17.25", 438.2 mm
Depth	8.31", 211.1 mm
Net Weight	27.30 lbs, 12.38 kg
Shipping Weight	30.80 lbs, 13.97 kg

MATERIALS OF CONSTRUCTION

Copper voice coil
Fiberglass former
Ferrite magnet
Bumped Vented Extended core
Die-cast aluminum basket
Water resistant paper cone
Treated cloth cone edge
Water resistant treated paper dust cap



FREQUENCY RESPONSE & IMPEDANCE CURVE*



* See footnotes on page 83 for information regarding usable frequency range, nominal impedance, power rating and sensitivity.

PROFESSIONAL SERIES

DEFINIMAX™ 4018LF

Recommended for professional audio and bass as a high power, low distortion subwoofer in single or multi-driver designs.



SPECIFICATION

Nominal Basket Diameter	18.0", 457 mm
Nominal Impedance*	8 Ω
Power Rating**	
Watts	800 W
Music Program	1600 W
Resonance	32 Hz
Usable Frequency Range	36 Hz – 0.2 kHz
Sensitivity***	95.0 dB
Magnet Weight	109 oz.
Gap Height	.375", 9.5 mm
Voice Coil Diameter	4.0", 102 mm

THIELE & SMALL PARAMETERS*

Fs	32 Hz
Re	6.19 Ω
Le	4.78 mH
Qms	10.38
Qes	0.36
Qts	0.35
Vas	8.40 cu.ft., 237.90 liters
Vd	939.0 cc
Cms	0.12 mm/N
BL	27.00 T-M
Mms	211 grams
EBP	89
Xmax	7.90 mm
Sd	1188.0 cm ²
Xlim	15.9 mm

MOUNTING INFORMATION

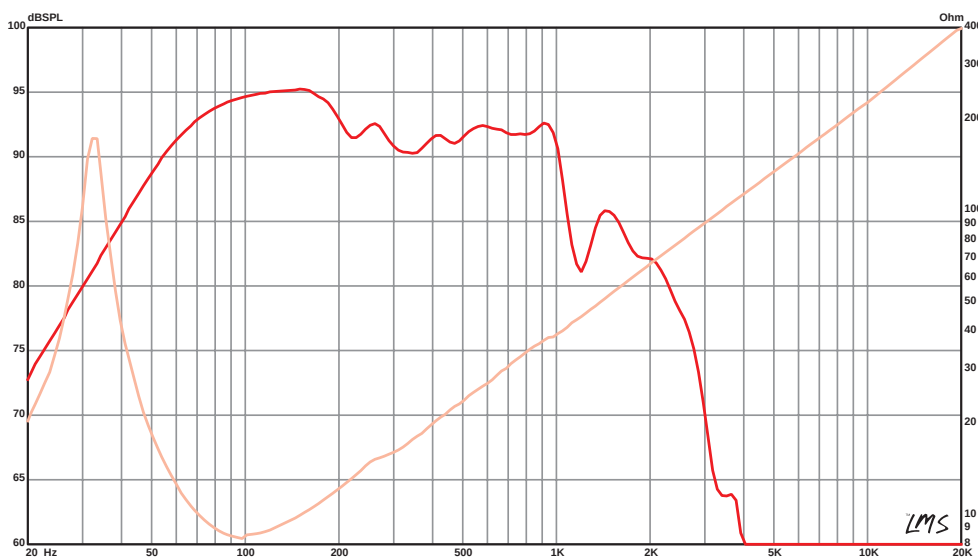
Recommended Enclosure Volume	
Sealed	N/A
Vented	125.00–210.00 liters, 4.40–7.40 cu.ft.
Driver Volume Displaced	0.234 cu.ft., 6.62 liters
Overall Diameter	18.00", 457.2 mm
Baffle Hole Diameter	16.57", 420.9 mm
Front Sealing Gasket	Yes
Rear Sealing Gasket	Yes
Mounting Holes Diameter	0.28", 7.1 mm
Mounting Holes B.C.D.	17.25", 438.2 mm
Depth	8.13", 206.5 mm
Net Weight	24.00 lbs , 10.89 kg
Shipping Weight	26.00 lbs , 11.79 kg

MATERIALS OF CONSTRUCTION

Copper voice coil
Polyimide former
Ferrite magnet
Undercut with aluminum shorting ring and Core
Periphery Ventilation
Die-cast aluminum basket
Water resistant paper cone
Cloth cone edge
Water resistant treated paper dust cap



FREQUENCY RESPONSE & IMPEDANCE CURVE*



* See footnotes on page 83 for information regarding usable frequency range, nominal impedance, power rating and sensitivity.

PROFESSIONAL SERIES

OMEGA PRO-18A

Recommended for professional audio as a woofer in vented enclosures. Also ideal for horn loading and scoops.



SPECIFICATION

Nominal Basket Diameter	18.0", 457 mm
Nominal Impedance*	8 or 4 Ω
Power Rating**	
Watts	800 W
Music Program	1600 W
Resonance	25 Hz
Usable Frequency Range	40 Hz – 0.8 kHz
Sensitivity***	97.0 dB
Magnet Weight	109 oz.
Gap Height	.375", 9.5 mm
Voice Coil Diameter	4.0", 102 mm

THIELE & SMALL PARAMETERS*

Fs	25 Hz
Re	5.20 Ω
Le	1.67 mH
Qms	8.18
Qes	0.32
Qts	0.31
Vas	19.40 cu.ft., 548.70 liters
Vd	556.0 cc
Cms	0.29 mm/N
BL	18.80 T-M
Mms	137 grams
EBP	79
Xmax	4.80 mm
Sd	1159.0 cm ²
Xlim	16.0 mm

MOUNTING INFORMATION

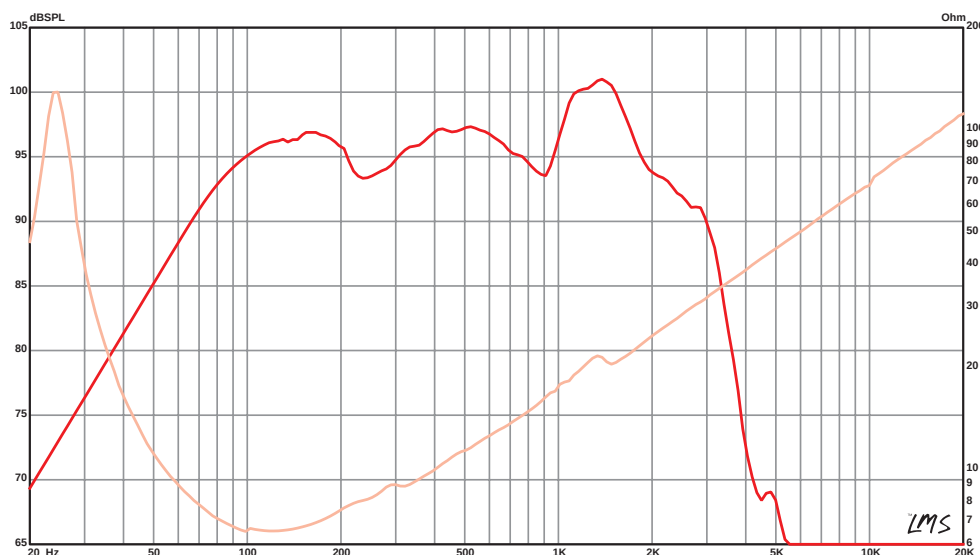
Recommended Enclosure Volume	
Sealed	N/A
Vented	96.00–198.00 liters, 3.40–7.00 cu.ft.
Driver Volume Displaced	0.234 cu.ft., 6.62 liters
Overall Diameter	18.00", 457.2 mm
Baffle Hole Diameter	16.56", 420.6 mm
Front Sealing Gasket	Yes
Rear Sealing Gasket	Yes
Mounting Holes Diameter	0.28", 7.1 mm
Mounting Holes B.C.D.	17.25", 438.2 mm
Depth	8.15", 207.0 mm
Net Weight	25.20 lbs , 11.43 kg
Shipping Weight	28.90 lbs , 13.11 kg

MATERIALS OF CONSTRUCTION

Copper voice coil
Polyimide former
Ferrite magnet
Vented and extended core
Die-cast aluminum basket
Paper cone
Cloth cone edge
Solid composition paper dust cap



FREQUENCY RESPONSE & IMPEDANCE CURVE*



* See footnotes on page 83 for information regarding usable frequency range, nominal impedance, power rating and sensitivity.

PROFESSIONAL SERIES

SIGMA PRO 18A-2

Professional audio woofer with high efficiency recommended in vented enclosures.



SPECIFICATION

Nominal Basket Diameter	18.0", 457 mm
Nominal Impedance*	8 Ω
Power Rating**	
Watts	650 W
Music Program	1300 W
Resonance	28 Hz
Usable Frequency Range	41 Hz – 2.4 kHz
Sensitivity***	99.0 dB
Magnet Weight	120 oz.
Gap Height	.375", 9.5 mm
Voice Coil Diameter	3.0", 76 mm

THIELE & SMALL PARAMETERS*

Fs	28 Hz
Re	6.29 Ω
Le	1.90 mH
Qms	8.28
Qes	0.30
Qts	0.29
Vas	15.60 cu.ft., 441.20 liters
Vd	695.0 cc
Cms	0.24 mm/N
BL	22.10 T-M
Mms	130 grams
EBP	93
Xmax	6.10 mm
Sd	1140.0 cm ²
Xlim	18.0 mm

MOUNTING INFORMATION

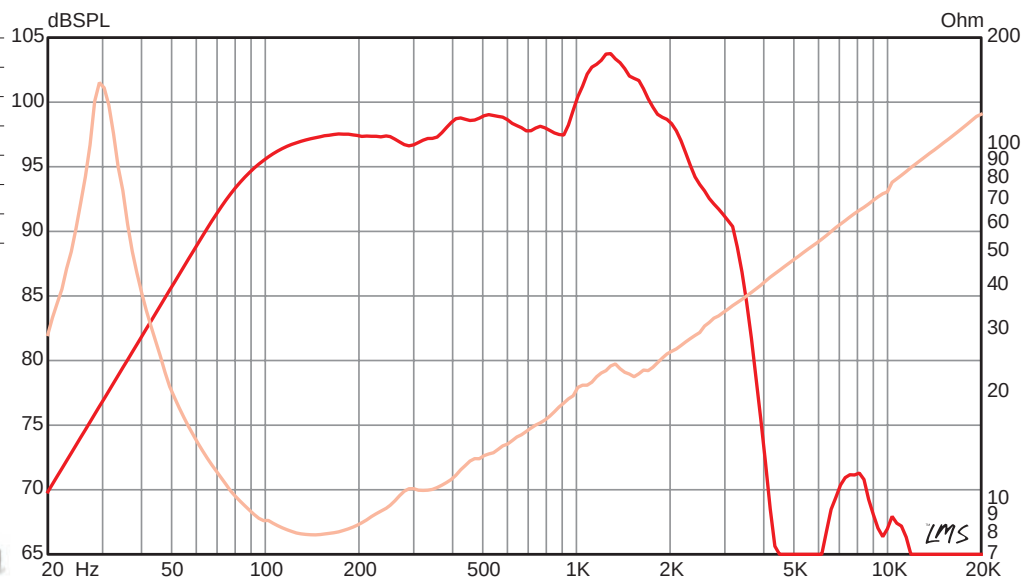
Recommended Enclosure Volume	
Sealed	N/A
Vented	93.00–212.00 liters, 3.30–7.50 cu.ft.
Driver Volume Displaced	0.234 cu.ft., 6.62 liters
Overall Diameter	18.00", 457.2 mm
Baffle Hole Diameter	16.56", 420.6 mm
Front Sealing Gasket	Yes
Rear Sealing Gasket	Yes
Mounting Holes Diameter	0.28", 7.1 mm
Mounting Holes B.C.D.	17.25", 438.2 mm
Depth	8.15", 207.0 mm
Net Weight	24.50 lbs , 11.11 kg
Shipping Weight	28.10 lbs , 12.75 kg

MATERIALS OF CONSTRUCTION

Copper voice coil
Polyimide former
Ferrite magnet
Vented and extended core
Die-cast aluminum basket
Paper cone
Cloth cone edge
Solid composition paper dust cap



FREQUENCY RESPONSE & IMPEDANCE CURVE*



* See footnotes on page 83 for information regarding usable frequency range, nominal impedance, power rating and sensitivity.

PROFESSIONAL SERIES

DELTA PRO-18A

Long throw subwoofer for very small vented boxes. Over-sized top plate and large pole vent help keep the coil cool.



SPECIFICATION

Nominal Basket Diameter	18.0", 457 mm
Nominal Impedance*	8 or 4 Ω
Power Rating**	
Watts	500 W
Music Program	1000 W
Resonance	28 Hz
Usable Frequency Range	37 Hz – 0.2 kHz
Sensitivity***	96.0 dB
Magnet Weight	67 oz.
Gap Height	.380", 9.7 mm
Voice Coil Diameter	2.5", 64 mm

THIELE & SMALL PARAMETERS*

Fs	28 Hz
Re	5.30 Ω
Le	3.43 mH
Qms	10.38
Qes	0.33
Qts	0.32
Vas	17.41 cu.ft., 493.20 liters
Vd	796.0 cc
Cms	0.25 mm/N
BL	18.90 T-M
Mms	128 grams
EBP	84
Xmax	6.70 mm
Sd	1188.0 cm ²
Xlim	15.0 mm

MOUNTING INFORMATION

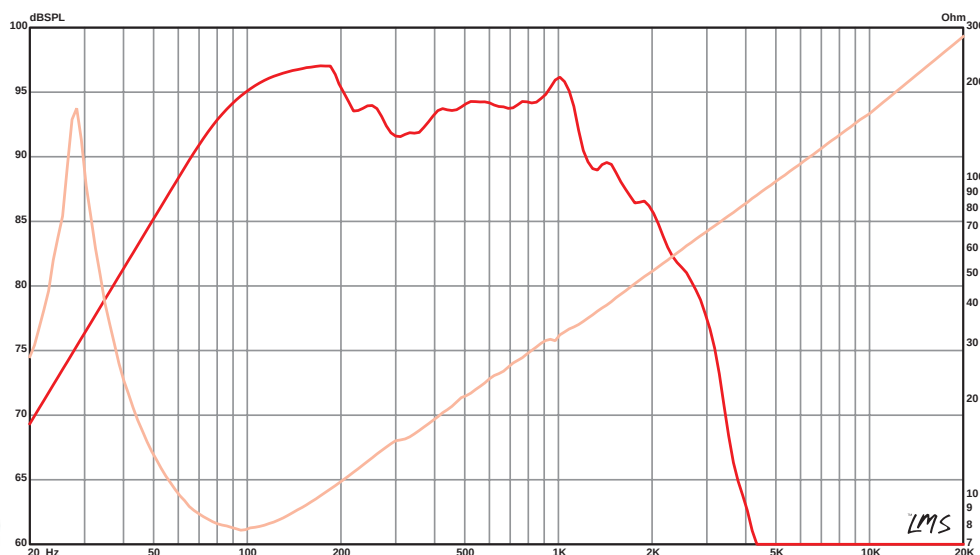
Recommended Enclosure Volume	
Sealed	N/A
Vented	85.00–297.00 liters, 3.00–10.50 cu.ft.
Driver Volume Displaced	0.212 cu.ft., 6.01 liters
Overall Diameter	18.00", 457.2 mm
Baffle Hole Diameter	16.57", 420.9 mm
Front Sealing Gasket	Yes
Rear Sealing Gasket	Yes
Mounting Holes Diameter	0.28", 7.1 mm
Mounting Holes B.C.D.	17.25", 438.2 mm
Depth	8.13", 206.5 mm
Net Weight	17.00 lbs, 7.71 kg
Shipping Weight	20.50 lbs, 9.30 kg

MATERIALS OF CONSTRUCTION

Copper voice coil
Polyimide former
Ferrite magnet
Vented and extended core
Die-cast aluminum basket
Paper cone
Cloth cone edge
Solid composition paper dust cap



FREQUENCY RESPONSE & IMPEDANCE CURVE*



* See footnotes on page 83 for information regarding usable frequency range, nominal impedance, power rating and sensitivity.

LIGHTEN UP



KAPPALITE 3015
15" / 450 W

only
7.9 LBS.

Our
NEODYMIUM SERIES
*takes the weight out,
but leaves the
performance
in.*

There are 12 unique models offered in our Neodymium Professional Series. Each one is designed with a specific application in mind. And all are built with the needs of audio professionals at the forefront. Lighter weight is just one of the benefits of neodymium. From heavy-duty subwoofers, midranges and transducers in truncated frames for line arrays, punch, clarity and balance remain unmatched in these speakers.

Every Eminence speaker is backed by a seven-year warranty against manufacturer's defects*. With over 1,200 dealers and distributors worldwide, the sound you want is within reach.



USAGE GUIDE

	CLOSED BOX	REFLEX BOX	HORN LOADING	SUBWOOFER	WOOFER	MID BASS	MIDRANGE	BASS GUITAR
ALPHALITE 6A	✓	✓	✓		✓	✓	✓	
ALPHALITE 6A-CBMR			✓				✓	✓
DELTAHITE II 2510	✓	✓	✓		✓	✓		✓
KAPPALITE 3010HO	✓	✓	✓				✓	
KAPPALITE 3010MB	✓	✓	✓			✓	✓	
KAPPALITE 3010LF	✓	✓	✓	✓	✓			✓
DELTAHITE II 2512	✓	✓	✓		✓	✓		✓
KAPPALITE 3012HO	✓	✓	✓		✓	✓	✓	✓
KAPPALITE 3012LF	✓	✓	✓	✓	✓			✓
DELTAHITE II 2515	✓	✓			✓	✓		✓
KAPPALITE 3015		✓	✓		✓	✓		✓
KAPPALITE 3015LF		✓	✓	✓	✓			✓

A = 8 Ω | B=16 Ω | C=4 Ω | Refer to each product's detail page for alternate impedances.

*Warranty policy may vary outside of the continental United States and Canada.
Check with your local distributor for warranty details.

NEODYMIUM SERIES

ALPHALITE™ 6A

Lightweight pro audio mid/bass driver. For sealed, vented, or infinite baffle applications.



SPECIFICATION

Nominal Basket Diameter	6.5", 165 mm
Nominal Impedance*	8 Ω
Power Rating**	
Watts	100 W
Music Program	200 W
Resonance	126 Hz
Usable Frequency Range	100 Hz – 5.5 kHz
Sensitivity***	94.0 dB
Magnet Weight	4 oz.
Gap Height	.250", 6.4 mm
Voice Coil Diameter	1.5", 38 mm

THIELE & SMALL PARAMETERS*

Fs	126 Hz
Re	7.30 Ω
Le	0.53 mH
Qms	6.51
Qes	0.61
Qts	0.56
Vas	0.17 cu.ft., 4.92 liters
Vd	46.0 cc
Cms	0.21 mm/N
BL	8.45 T-M
Mms	8 grams
EBP	205
Xmax	3.50 mm
Sd	129.9 cm2
Xlim	4.0 mm

MOUNTING INFORMATION

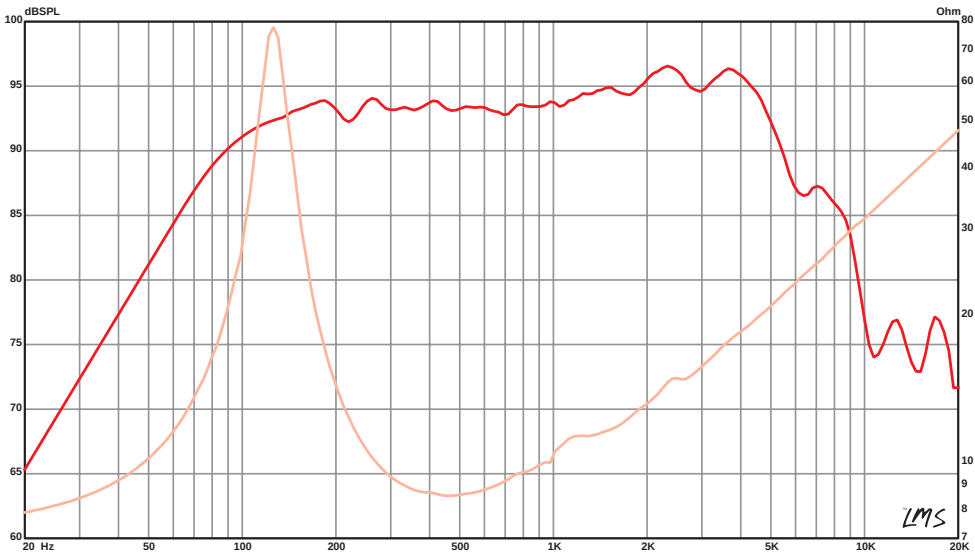
Recommended Enclosure Volume	
Sealed	2.83–566.00 liters, 0.10–20.00 cu.ft.
Vented	3.00–16.00 liters, 0.10–0.60 cu.ft.
Driver Volume Displaced	0.010 cu.ft., 0.27 liters
Overall Diameter	6.59", 167.4 mm
Baffle Hole Diameter	5.69", 144.5 mm
Front Sealing Gasket	Yes
Rear Sealing Gasket	Yes
Mounting Holes Diameter	0.23", 5.8 mm
Mounting Holes B.C.D.	6.06", 153.9 mm
Depth	2.40", 61.0 mm
Net Weight	2.20 lbs , 1.00 kg
Shipping Weight	2.90 lbs , 1.32 kg

MATERIALS OF CONSTRUCTION

- Round copper voice coil
- Kapton former
- Neodymium magnet
- Vented and Extended core
- Pressed steel basket
- Paper cone
- Cloth cone edge
- Treated paper dust cap



FREQUENCY RESPONSE & IMPEDANCE CURVE*



* See footnotes on page 83 for information regarding usable frequency range, nominal impedance, power rating and sensitivity.

NEODYMIUM SERIES

ALPHALITE™ 6A-CBMR

Lightweight neodymium 6.5" closed back midrange for pro audio or MI use. Great in bass guitar rigs.



SPECIFICATION

Nominal Basket Diameter	6.5", 165 mm
Nominal Impedance*	8 Ω
Power Rating**	
Watts	100 W
Music Program	200 W
Resonance	501 Hz
Usable Frequency Range	500 Hz – 4.3 kHz
Sensitivity***	99.8 dB
Magnet Weight	4 oz.
Gap Height	.250", 6.4 mm
Voice Coil Diameter	1.5", 38 mm

THIELE & SMALL PARAMETERS*

Fs	501 Hz
Re	7.40 Ω
Le	0.49 mH
Qms	9.09
Qes	1.83
Qts	1.53
Vas	0.01 cu.ft., 0.27 liters
Vd	1.4 cc
Cms	0.01 mm/N
BL	9.81 T-M
Mms	8 grams
EBP	273
Xmax	0.10 mm
Sd	139.7 cm ²
Xlim	1.6 mm

MOUNTING INFORMATION

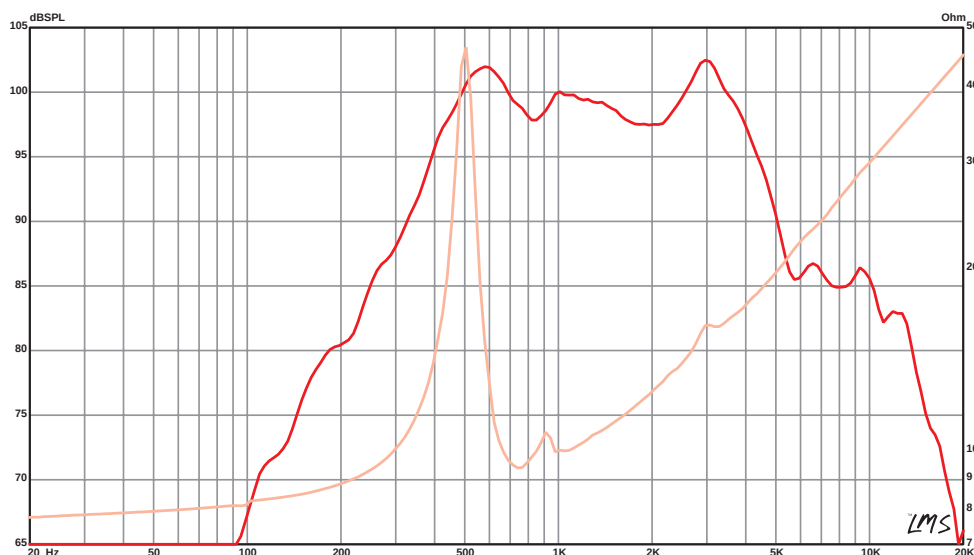
Recommended Enclosure Volume	
Sealed	N/A
Vented	N/A
Driver Volume Displaced	0.021 cu.ft., 0.59 liters
Overall Diameter	6.59", 167.4 mm
Baffle Hole Diameter	5.69", 144.5 mm
Front Sealing Gasket	Yes
Rear Sealing Gasket	Yes
Mounting Holes Diameter	0.23", 5.8 mm
Mounting Holes B.C.D.	6.06", 153.9 mm
Depth	2.40", 61.0 mm
Net Weight	2.30 lbs, 1.04 kg
Shipping Weight	3.00 lbs, 1.36 kg

MATERIALS OF CONSTRUCTION

Copper voice coil
Kapton former
Neodymium magnet
Non-vented core
Pressed steel basket
Paper cone
Full paper cone
Treated paper dust cap



FREQUENCY RESPONSE & IMPEDANCE CURVE*



* See footnotes on page 83 for information regarding usable frequency range, nominal impedance, power rating and sensitivity.

NEODYMIUM SERIES

KAPPALITE™ 3010LF

High power subwoofer
recommended for vented and horn
loaded enclosures.



SPECIFICATION

Nominal Basket Diameter	10.0", 254 mm
Nominal Impedance*	8 Ω
Power Rating**	
Watts	450 W
Music Program	900 W
Resonance	39 Hz
Usable Frequency Range	42 Hz – 1.6 kHz
Sensitivity***	92.7 dB
Magnet Weight	11 oz.
Gap Height	.365", 9.3 mm
Voice Coil Diameter	3.0", 76 mm

THIELE & SMALL PARAMETERS*

Fs	39 Hz
Re	7.20 Ω
Le	1.13 mH
Qms	11.75
Qes	0.28
Qts	0.27
Vas	2.20 cu.ft., 62.41 liters
Vd	305.4 cc
Cms	0.35 mm/N
BL	17.45 T-M
Mms	49 grams
EBP	138
Xmax	8.52 mm
Sd	358.4 cm ²
Xlim	15.7 mm

MOUNTING INFORMATION

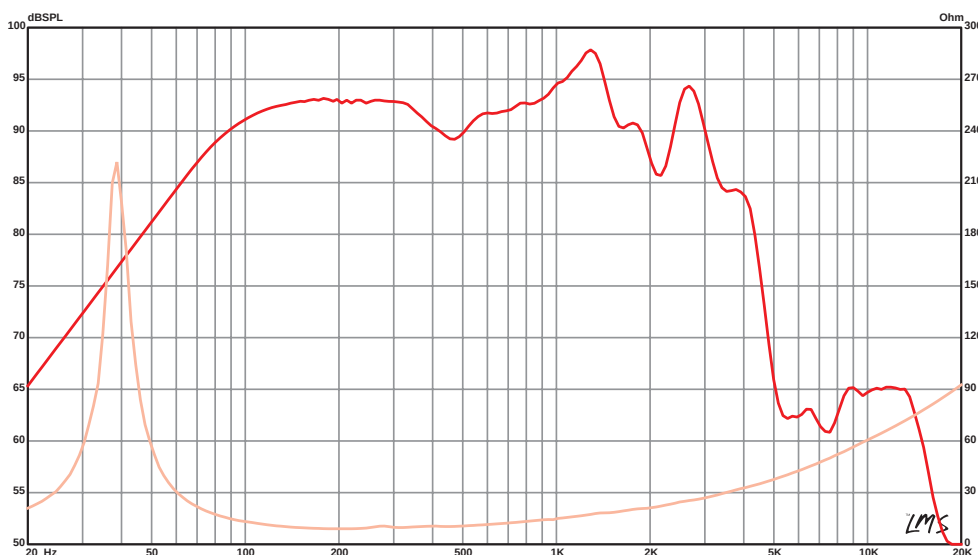
Recommended Enclosure Volume	
Sealed	0.00–0.00 liters, 0.00–0.00 cu.ft.
Vented	19.82–84.95 liters, 0.70–3.00 cu.ft.
Driver Volume Displaced	0.037 cu.ft., 1.06 liters
Overall Diameter	11.18", 284.0 mm
Baffle Hole Diameter	9.12", 231.7 mm
Front Sealing Gasket	Yes
Rear Sealing Gasket	Yes
Mounting Holes Diameter	0.29", 7.4 mm
Mounting Holes B.C.D.	10.49", 266.5 mm
Depth	5.00", 127.0 mm
Net Weight	7.60 lbs, 3.45 kg
Shipping Weight	9.20 lbs, 4.17 kg

MATERIALS OF CONSTRUCTION

Copper voice coil
Polyimide former
Neodymium magnet
Vented core
Die-cast aluminum basket
Treated paper cone
Sealed cloth Edge
Treated paper dust cap



FREQUENCY RESPONSE & IMPEDANCE CURVE*



* See footnotes on page 83 for information regarding usable frequency range, nominal impedance, power rating and sensitivity.

NEODYMIUM SERIES

KAPPALITE™ 3010MB

Lightweight high power mid/bass driver. When used as a true midrange, a small sealed box will work. When used as a mid/bass, use a vented box.



SPECIFICATION

Nominal Basket Diameter	10.0", 254 mm
Nominal Impedance*	8 Ω
Power Rating**	
Watts	400 W
Music Program	800 W
Resonance	51 Hz
Usable Frequency Range	85 Hz – 3.6 kHz
Sensitivity***	98.6 dB
Magnet Weight	11 oz.
Gap Height	.365", 9.3 mm
Voice Coil Diameter	3.0", 76 mm

THIELE & SMALL PARAMETERS*

Fs	51 Hz
Re	5.01 Ω
Le	0.68 mH
Qms	6.83
Qes	0.21
Qts	0.20
Vas	1.84 cu.ft., 52.10 liters
Vd	183.1 cc
Cms	0.28 mm/N
BL	16.51 T-M
Mms	36 grams
EBP	244
Xmax	5.00 mm
Sd	366.1 cm ²
Xlim	7.5 mm

MOUNTING INFORMATION

Recommended Enclosure Volume	
Sealed	15.57–43.89 liters, 0.55–1.55 cu.ft.
Vented	19.82–63.71 liters, 0.70–2.25 cu.ft.
Driver Volume Displaced	0.037 cu.ft., 1.04 liters
Overall Diameter	11.18", 284.0 mm
Baffle Hole Diameter	9.12", 231.7 mm
Front Sealing Gasket	Yes
Rear Sealing Gasket	Yes
Mounting Holes Diameter	0.29", 7.4 mm
Mounting Holes B.C.D.	10.49", 266.5 mm
Depth	4.61", 117.1 mm
Net Weight	7.10 lbs, 3.22 kg
Shipping Weight	8.70 lbs, 3.95 kg

MATERIALS OF CONSTRUCTION

Edge wound copper voice coil

Polyimide former

Neodymium magnet

Vented core

Die-cast aluminum basket

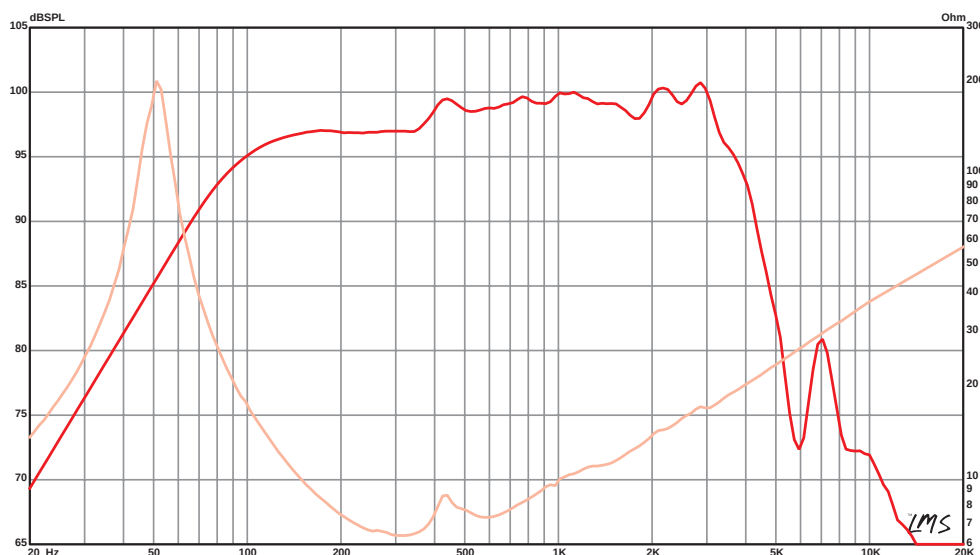
Treated paper cone

Sealed cloth Edge

Treated paper dust cap



FREQUENCY RESPONSE & IMPEDANCE CURVE*



* See footnotes on page 83 for information regarding usable frequency range, nominal impedance, power rating and sensitivity.

NEODYMIUM SERIES

KAPPALITE™ 3010H0

Lightweight high power, high output midrange driver. For use in small sealed and vented enclosures.



SPECIFICATION

Nominal Basket Diameter	10.0", 254 mm
Nominal Impedance*	8 Ω
Power Rating**	
Watts	400 W
Music Program	800 W
Resonance	61 Hz
Usable Frequency Range	400 Hz – 4.0 kHz
Sensitivity***	99.9 dB
Magnet Weight	11 oz.
Gap Height	.365", 9.3 mm
Voice Coil Diameter	3.0", 76 mm

THIELE & SMALL PARAMETERS*

Fs	61 Hz
Re	5.46 Ω
Le	0.57 mH
Qms	9.93
Qes	0.27
Qts	0.26
Vas	1.31 cu.ft., 37.21 liters
Vd	162.2 cc
Cms	0.20 mm/N
BL	16.27 T-M
Mms	34 grams
EBP	227
Xmax	4.43 mm
Sd	366.1 cm ²
Xlim	7.5 mm

MOUNTING INFORMATION

Recommended Enclosure Volume	
Sealed	9.91–21.24 liters, 0.35–0.75 cu.ft.
Vented	15.01–28.32 liters, 0.53–1.00 cu.ft.
Driver Volume Displaced	0.037 cu.ft., 1.04 liters
Overall Diameter	11.18", 284.0 mm
Baffle Hole Diameter	9.12", 231.7 mm
Front Sealing Gasket	Yes
Rear Sealing Gasket	Yes
Mounting Holes Diameter	0.29", 7.4 mm
Mounting Holes B.C.D.	10.49", 266.5 mm
Depth	4.61", 117.1 mm
Net Weight	7.10 lbs, 3.22 kg
Shipping Weight	8.70 lbs, 3.95 kg

MATERIALS OF CONSTRUCTION

Edge wound aluminum voice coil

Fiberglass former

Neodymium magnet

Vented Core

Die-cast aluminum basket

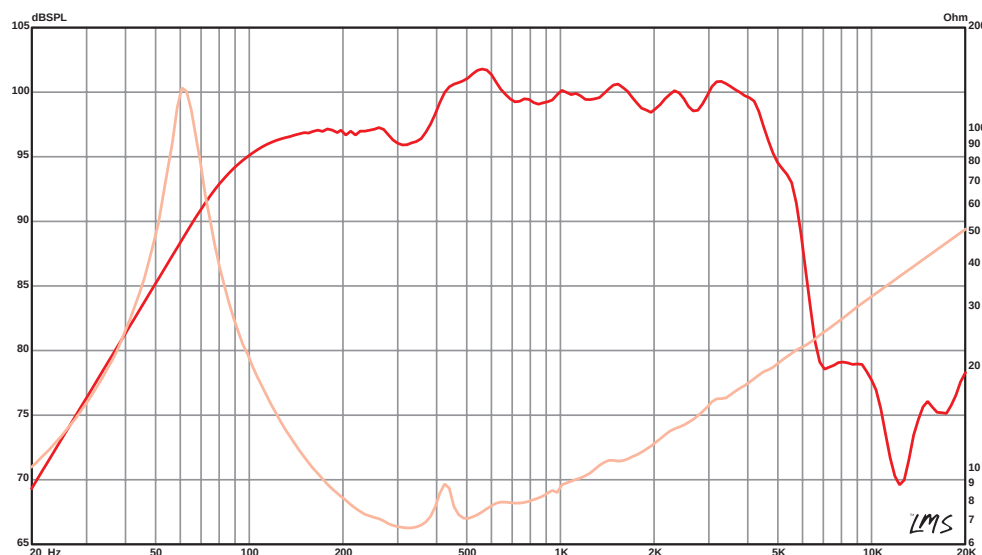
Treated paper cone

Sealed cloth Edge

Treated Paper dust cap



FREQUENCY RESPONSE & IMPEDANCE CURVE*



* See footnotes on page 83 for information regarding usable frequency range, nominal impedance, power rating and sensitivity.

NEODYMIUM SERIES

DELTALITE® II 2510

Recommended for pro audio as a mid/hi or full-range and monitor. Also suited for bass guitar and works well in sealed or vented enclosures.



SPECIFICATION

Nominal Basket Diameter	10.0", 254 mm
Nominal Impedance*	8 Ω
Power Rating**	
Watts	250 W
Music Program	500 W
Resonance	53 Hz
Usable Frequency Range	60 Hz – 4.0 kHz
Sensitivity***	97.3 dB
Magnet Weight	7 oz.
Gap Height	.275", 7.0 mm
Voice Coil Diameter	2.5", 64 mm

THIELE & SMALL PARAMETERS*

Fs	53 Hz
Re	5.06 Ω
Le	0.40 mH
Qms	5.76
Qes	0.45
Qts	0.42
Vas	1.90 cu.ft., 52.50 liters
Vd	147.0 cc
Cms	0.30 mm/N
BL	10.60 T-M
Mms	31 grams
EBP	117
Xmax	4.20 mm
Sd	350.1 cm2
Xlim	8.0 mm

MOUNTING INFORMATION

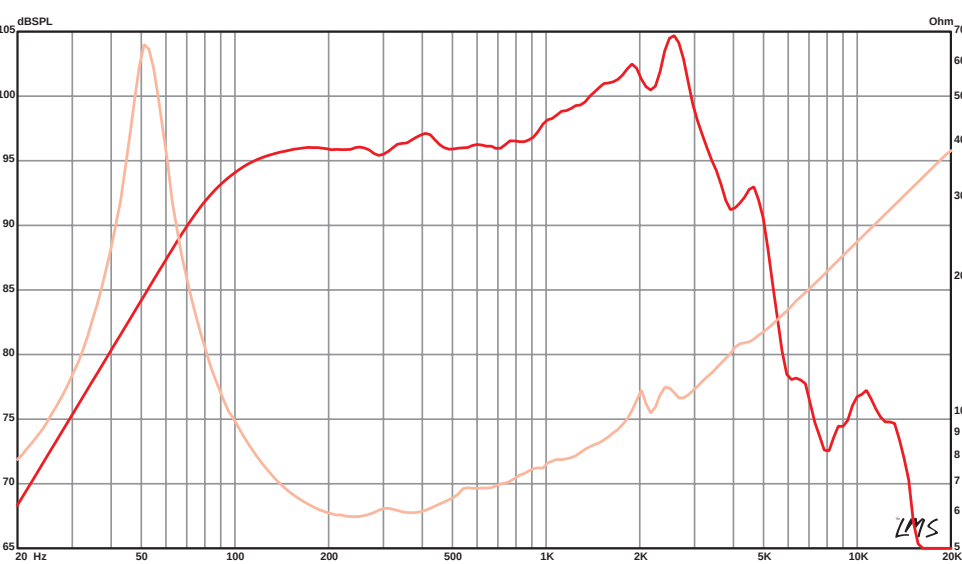
Recommended Enclosure Volume	
Sealed	12.70–17.00 liters, 0.45–0.60 cu.ft.
Vented	17.00–39.60 liters, 0.60–1.40 cu.ft.
Driver Volume Displaced	0.026 cu.ft., 0.74 liters
Overall Diameter	10.25", 260.4 mm
Baffle Hole Diameter	9.15", 232.4 mm
Front Sealing Gasket	Yes
Rear Sealing Gasket	Yes
Mounting Holes Diameter	0.28", 7.1 mm
Mounting Holes B.C.D.	9.73", 247.1 mm
Depth	4.90", 124.5 mm
Net Weight	4.60 lbs , 2.09 kg
Shipping Weight	5.70 lbs , 2.59 kg

MATERIALS OF CONSTRUCTION

Aluminum voice coil
Polyimide former
Neodymium magnet
Vented core
Die-cast aluminum basket/ heatsink
Paper Cone
Cloth cone edge
Solid composition paper dust cap



FREQUENCY RESPONSE & IMPEDANCE CURVE*



* See footnotes on page 83 for information regarding usable frequency range, nominal impedance, power rating and sensitivity.

NEODYMIUM SERIES

KAPPALITE™ 3012LF

Lightweight, high power, low frequency woofer recommended for pro audio and bass guitar in vented enclosures.



SPECIFICATION

Nominal Basket Diameter	12.0", 305 mm
Nominal Impedance*	8 Ω
Power Rating**	
Watts	450 W
Music Program	900 W
Resonance	37 Hz
Usable Frequency Range	46 Hz – 2.0 kHz
Sensitivity***	95.5 dB
Magnet Weight	11 oz.
Gap Height	.365", 9.3 mm
Voice Coil Diameter	3.0", 76 mm

THIELE & SMALL PARAMETERS*

Fs	37 Hz
Re	5.60 Ω
Le	0.98 mH
Qms	6.94
Qes	0.34
Qts	0.32
Vas	3.77 cu.ft., 106.65 liters
Vd	496.0 cc
Cms	0.26 mm/N
BL	16.70 T-M
Mms	72 grams
EBP	110
Xmax	9.10 mm
Sd	545.4 cm ²
Xlim	14.5 mm

MOUNTING INFORMATION

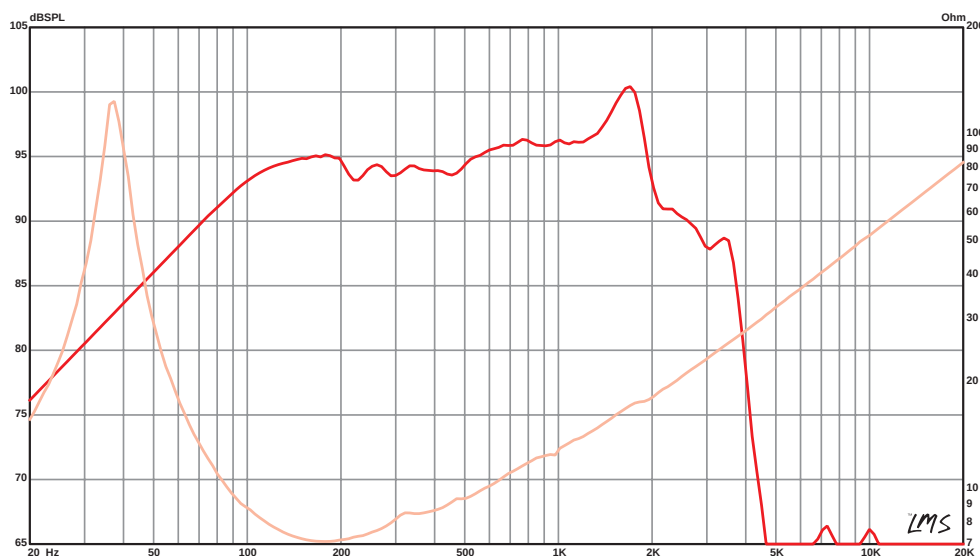
Recommended Enclosure Volume	
Sealed	23.00–59.00 liters, 0.80–2.10 cu.ft.
Vented	37.00–85.00 liters, 1.30–3.00 cu.ft.
Driver Volume Displaced	0.055 cu.ft., 1.56 liters
Overall Diameter	12.38", 314.5 mm
Baffle Hole Diameter	11.06", 280.9 mm
Front Sealing Gasket	Yes
Rear Sealing Gasket	Yes
Mounting Holes Diameter	0.28", 7.1 mm
Mounting Holes B.C.D.	11.62", 295.2 mm
Depth	6.00", 152.4 mm
Net Weight	7.60 lbs, 3.45 kg
Shipping Weight	9.20 lbs, 4.17 kg

MATERIALS OF CONSTRUCTION

Copper voice coil
Kapton former
Neodymium magnet
Vented core
Die-cast aluminum basket
Treated paper cone
Sealed cloth Edge
Treated paper dust cap



FREQUENCY RESPONSE & IMPEDANCE CURVE*



* See footnotes on page 83 for information regarding usable frequency range, nominal impedance, power rating and sensitivity.

NEODYMIUM SERIES

KAPPALITE™ 3012H0

Recommended for vented professional audio enclosures for full-range or as mids.



SPECIFICATION

Nominal Basket Diameter	12.0", 305 mm
Nominal Impedance*	8 Ω
Power Rating**	
Watts	400 W
Music Program	800 W
Resonance	52 Hz
Usable Frequency Range	51 Hz – 3.5 kHz
Sensitivity***	100.5 dB
Magnet Weight	11 oz.
Gap Height	.365", 9.3 mm
Voice Coil Diameter	3.0", 76 mm

THIELE & SMALL PARAMETERS*

Fs	52 Hz
Re	5.50 Ω
Le	0.57 mH
Qms	8.39
Qes	0.33
Qts	0.32
Vas	2.86 cu.ft., 81.10 liters
Vd	330.0 cc
Cms	0.20 mm/N
BL	15.90 T-M
Mms	47 grams
EBP	157
Xmax	6.20 mm
Sd	532.4 cm ²
Xlim	12.5 mm

MOUNTING INFORMATION

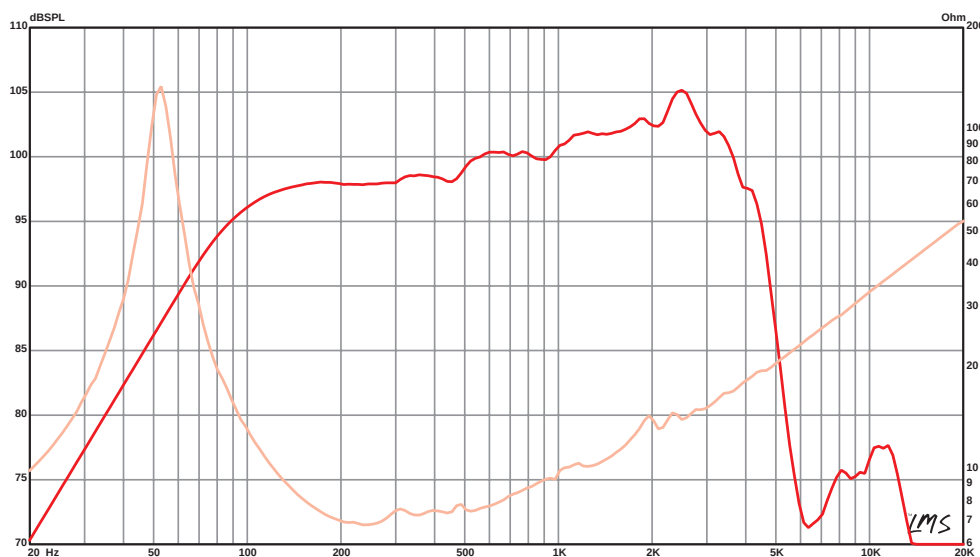
Recommended Enclosure Volume	
Sealed	28.00–76.00 liters, 1.00–2.70 cu.ft.
Vented	41.00–110.00 liters, 1.50–3.90 cu.ft.
Driver Volume Displaced	0.054 cu.ft., 1.53 liters
Overall Diameter	12.38", 314.5 mm
Baffle Hole Diameter	11.06", 280.9 mm
Front Sealing Gasket	Yes
Rear Sealing Gasket	Yes
Mounting Holes Diameter	0.28", 7.1 mm
Mounting Holes B.C.D.	11.62", 295.2 mm
Depth	5.63", 143.0 mm
Net Weight	7.10 lbs, 3.22 kg
Shipping Weight	8.70 lbs, 3.95 kg

MATERIALS OF CONSTRUCTION

Aluminum voice coil
Kapton former
Neodymium magnet
Vented core
Die-cast aluminum basket
Treated paper cone
Sealed cloth surround
Treated paper dust cap



FREQUENCY RESPONSE & IMPEDANCE CURVE*



* See footnotes on page 83 for information regarding usable frequency range, nominal impedance, power rating and sensitivity.

NEODYMIUM SERIES

DELTALITE® II 2512

Suited for pro audio as a mid/hi or full-range and monitor. Also recommended for bass guitar. Works well in sealed or vented enclosures.



SPECIFICATION

Nominal Basket Diameter	12.0", 305 mm
Nominal Impedance*	8 Ω
Power Rating**	
Watts	250 W
Music Program	500 W
Resonance	44 Hz
Usable Frequency Range	58 Hz – 4.3 kHz
Sensitivity***	99.9 dB
Magnet Weight	7 oz.
Gap Height	.275", 7.0 mm
Voice Coil Diameter	2.5", 64 mm

THIELE & SMALL PARAMETERS*

Fs	44 Hz
Re	5.17 Ω
Le	0.43 mH
Qms	4.17
Qes	0.45
Qts	0.41
Vas	4.76 cu.ft., 134.88 liters
Vd	255.0 cc
Cms	0.36 mm/N
BL	10.69 T-M
Mms	37 grams
EBP	96
Xmax	4.90 mm
Sd	519.5 cm2
Xlim	8.5 mm

MOUNTING INFORMATION

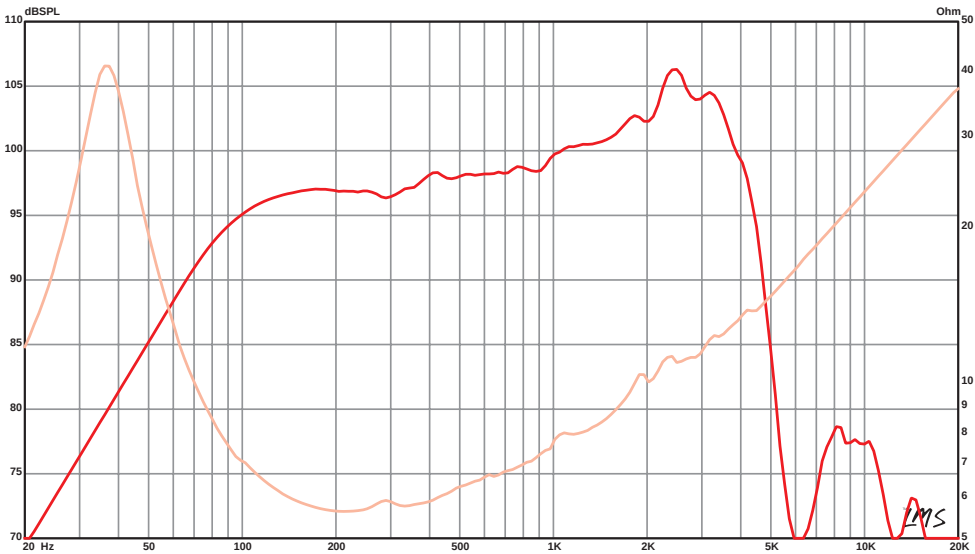
Recommended Enclosure Volume	
Sealed	25.49–42.48 liters, 0.90–1.50 cu.ft.
Vented	32.56–127.43 liters, 1.15–4.50 cu.ft.
Driver Volume Displaced	0.050 cu.ft., 1.42 liters
Overall Diameter	12.38", 314.5 mm
Baffle Hole Diameter	11.06", 280.9 mm
Front Sealing Gasket	Yes
Rear Sealing Gasket	Yes
Mounting Holes Diameter	0.28", 7.1 mm
Mounting Holes B.C.D.	11.62", 295.2 mm
Depth	6.06", 153.9 mm
Net Weight	5.10 lbs, 2.31 kg
Shipping Weight	6.80 lbs, 3.08 kg

MATERIALS OF CONSTRUCTION

- Aluminum voice coil
- Polyimide former
- Neodymium magnet
- Vented core
- Die-cast aluminum basket/ heatsink
- Paper cone
- Cloth cone edge
- Solid composition paper dust cap



FREQUENCY RESPONSE & IMPEDANCE CURVE*



* See footnotes on page 83 for information regarding usable frequency range, nominal impedance, power rating and sensitivity.

NEODYMIUM SERIES

KAPPALITE™ 3015LF

Recommended for professional audio and bass in vented enclosures.



SPECIFICATION

Nominal Basket Diameter	15.0", 381 mm
Nominal Impedance*	8 Ω
Power Rating**	
Watts	450 W
Music Program	900 W
Resonance	44 Hz
Usable Frequency Range	40 Hz – 1.5 kHz
Sensitivity***	98.4 dB
Magnet Weight	11 oz.
Gap Height	.365", 9.3 mm
Voice Coil Diameter	3.0", 76 mm

THIELE & SMALL PARAMETERS*

Fs	44 Hz
Re	5.50 Ω
Le	0.93 mH
Qms	8.97
Qes	0.48
Qts	0.46
Vas	5.30 cu.ft., 150.90 liters
Vd	846.0 cc
Cms	0.14 mm/N
BL	17.00 T-M
Mms	93 grams
EBP	90
Xmax	9.60 mm
Sd	881.1 cm ²
Xlim	17.0 mm

MOUNTING INFORMATION

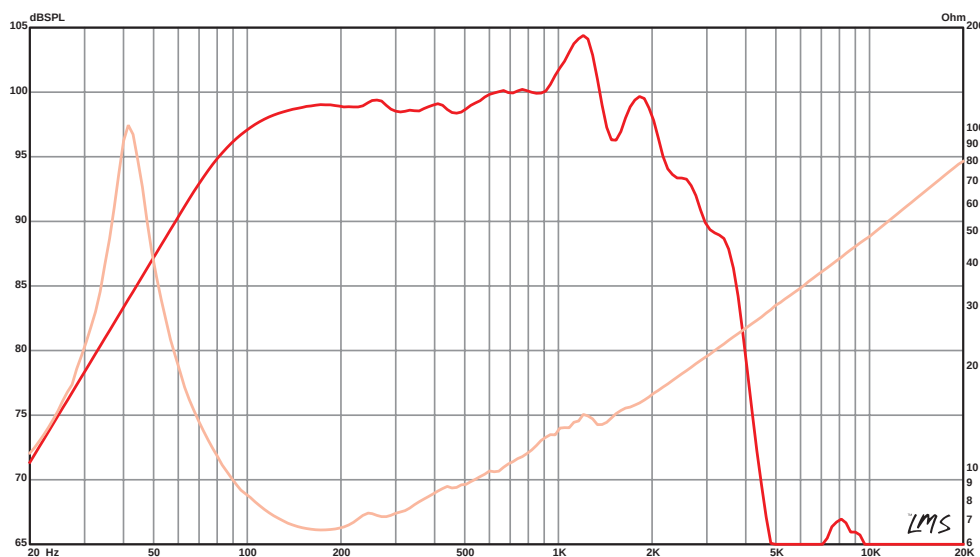
Recommended Enclosure Volume	
Sealed	N/A
Vented	99.00–195.00 liters, 3.50–6.90 cu.ft.
Driver Volume Displaced	0.090 cu.ft., 2.56 liters
Overall Diameter	15.32", 389.1 mm
Baffle Hole Diameter	14.03", 356.4 mm
Front Sealing Gasket	Yes
Rear Sealing Gasket	Yes
Mounting Holes Diameter	0.28", 7.1 mm
Mounting Holes B.C.D.	14.56", 369.8 mm
Depth	7.25", 184.2 mm
Net Weight	8.60 lbs, 3.90 kg
Shipping Weight	10.70 lbs, 4.85 kg

MATERIALS OF CONSTRUCTION

Copper voice coil
Kapton former
Neodymium magnet
Vented core
Die-cast aluminum basket/heatsink
Treated paper cone
Cloth cone edge
Treated paper dust cap



FREQUENCY RESPONSE & IMPEDANCE CURVE*



* See footnotes on page 83 for information regarding usable frequency range, nominal impedance, power rating and sensitivity.

NEODYMIUM SERIES

KAPPALITE™ 3015

Recommended for vented professional audio enclosures for full-range or as mids.



SPECIFICATION

Nominal Basket Diameter	15.0", 381 mm
Nominal Impedance*	8 Ω
Power Rating**	
Watts	450 W
Music Program	900 W
Resonance	45 Hz
Usable Frequency Range	40 Hz – 4.0 kHz
Sensitivity***	100.8 dB
Magnet Weight	11 oz.
Gap Height	.365", 9.3 mm
Voice Coil Diameter	3.0", 76 mm

THIELE & SMALL PARAMETERS*

Fs	45 Hz
Re	5.27 Ω
Le	0.64 mH
Qms	6.70
Qes	0.36
Qts	0.34
Vas	5.40 cu.ft., 153.00 liters
Vd	505.0 cc
Cms	0.15 mm/N
BL	18.60 T-M
Mms	84 grams
EBP	125
Xmax	5.90 mm
Sd	856.0 cm ²
Xlim	11.0 mm

MOUNTING INFORMATION

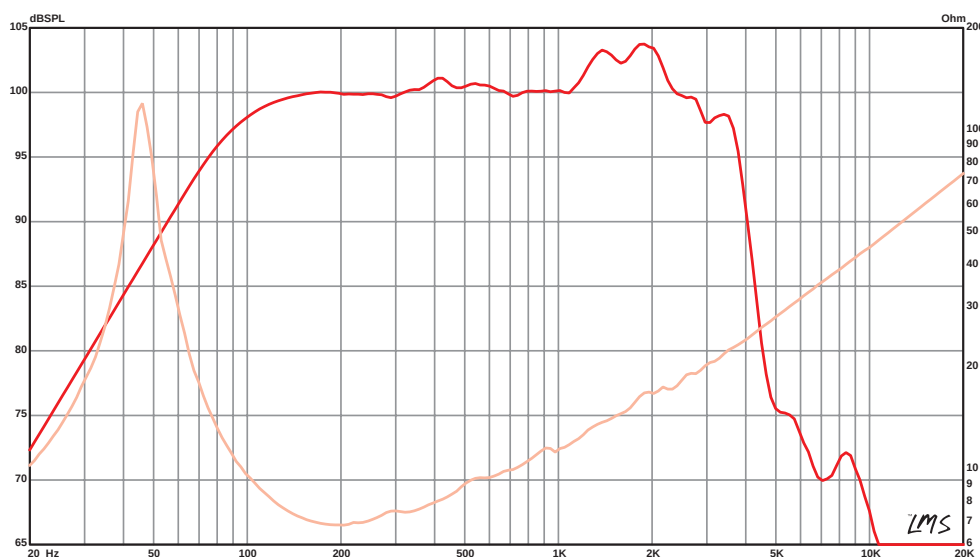
Recommended Enclosure Volume	
Sealed	N/A
Vented	51.00–144.00 liters, 1.80–5.10 cu.ft.
Driver Volume Displaced	0.090 cu.ft., 2.54 liters
Overall Diameter	15.32", 389.1 mm
Baffle Hole Diameter	14.00", 355.6 mm
Front Sealing Gasket	Yes
Rear Sealing Gasket	Yes
Mounting Holes Diameter	0.28", 7.1 mm
Mounting Holes B.C.D.	14.56", 369.8 mm
Depth	6.80", 172.7 mm
Net Weight	7.90 lbs, 3.58 kg
Shipping Weight	10.10 lbs, 4.58 kg

MATERIALS OF CONSTRUCTION

Copper voice coil
Polyimide former
Neodymium magnet
Vented core
Die-cast aluminum basket/ heatsink
Paper cone
Cloth cone edge
Solid composition paper dust cap



FREQUENCY RESPONSE & IMPEDANCE CURVE*



* See footnotes on page 83 for information regarding usable frequency range, nominal impedance, power rating and sensitivity.

NEODYMIUM SERIES

DELTALITE® II 2515

Recommended for pro audio as a mid/hi or full-range and monitor. Also suited for bass guitar. Works well in sealed or vented enclosures.



SPECIFICATION

Nominal Basket Diameter	15.0", 381 mm
Nominal Impedance*	8 Ω
Power Rating**	
Watts	300 W
Music Program	600 W
Resonance	42 Hz
Usable Frequency Range	54 Hz – 3.7 kHz
Sensitivity***	99.2 dB
Magnet Weight	7 oz.
Gap Height	.275", 7.0 mm
Voice Coil Diameter	2.5", 64 mm

THIELE & SMALL PARAMETERS*

Fs	42 Hz
Re	5.29 Ω
Le	1.15 mH
Qms	4.56
Qes	0.41
Qts	0.38
Vas	7.20 cu.ft., 204.00 liters
Vd	411.0 cc
Cms	0.20 mm/N
BL	15.70 T-M
Mms	72 grams
EBP	103
Xmax	4.80 mm
Sd	856.3 cm2
Xlim	9.0 mm

MOUNTING INFORMATION

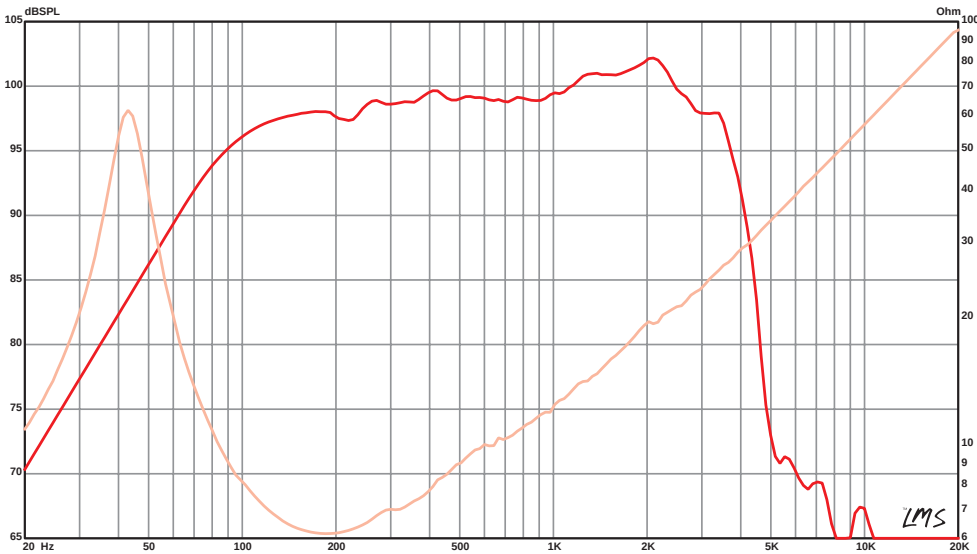
Recommended Enclosure Volume	
Sealed	42.50–48.00 liters, 1.50–1.70 cu.ft.
Vented	51.00–119.00 liters, 1.80–4.20 cu.ft.
Driver Volume Displaced	0.084 cu.ft., 2.38 liters
Overall Diameter	15.32", 389.1 mm
Baffle Hole Diameter	14.00", 355.6 mm
Front Sealing Gasket	Yes
Rear Sealing Gasket	Yes
Mounting Holes Diameter	0.28", 7.1 mm
Mounting Holes B.C.D.	14.56", 369.8 mm
Depth	6.81", 173.0 mm
Net Weight	5.70 lbs , 2.59 kg
Shipping Weight	7.90 lbs , 3.58 kg

MATERIALS OF CONSTRUCTION

- Aluminum voice coil
- Polyimide former
- Neodymium magnet
- Vented core
- Die-cast aluminum basket/ heatsink
- Paper cone
- Cloth cone edge
- Solid composition paper dust cap



FREQUENCY RESPONSE & IMPEDANCE CURVE*



* See footnotes on page 83 for information regarding usable frequency range, nominal impedance, power rating and sensitivity.

THE NEW STANDARD

Our
**AMERICAN
STANDARD SERIES**
*offers unmatched quality
and value.*

Each Eminence American Standard model can be identified by its economical stamped steel chassis. Although more affordable than cast aluminum, these frames provide an excellent and versatile chassis. We coat the basket and all metal parts with an epoxy-acrylic finish. Our in-house e-coat process lets us control the thickness of that coating to within 0.001". That's the diameter of a human hair and it's critical when working with close tolerance transducer motor designs. We then add front and rear sealing gaskets on each model to allow front or rear loading.

There are 27 unique models available in our American Standard series, each designed for versatility in a wide range of applications. And like our Professional series, every speaker is designed and assembled by hand with USA pride, and is backed by a seven-year warranty against manufacturer's defects*.

Eminence offers 6.5-15" models with applications ranging from standard subwoofers, two-way enclosures, and coaxials, to truncated line array models, monitor woofers, and high performance midranges setting records for output in car audio. No other loudspeaker line provides more choices, power handling, performance, and reliability for the price.



USAGE GUIDE

	CLOSED BOX	REFLEX BOX	HORN LOADING	SUBWOOFER	WOOFER	MID BASS	MIDRANGE	BASS GUITAR
ALPHA 6A AND C	✓	✓	✓		✓	✓	✓	
ALPHA 6CBMRA			✓			✓	✓	
BETA 6A	✓	✓	✓			✓	✓	
LA6 CBMR			✓				✓	
ALPHA 8A	✓	✓			✓	✓	✓	
ALPHA 8MRA			✓				✓	
BETA 8A	✓	✓	✓		✓	✓	✓	
BETA 8CX	✓	✓			✓	✓	✓	
ALPHA 10A	✓	✓	✓		✓	✓	✓	
BETA 10A	✓	✓	✓		✓	✓		✓
BETA 10CBMRA			✓				✓	
BETA 10CX	✓	✓			✓	✓	✓	
DELTA 10A AND B		✓	✓		✓	✓	✓	✓
ALPHA 12A	✓	✓			✓	✓	✓	
BETA 12A-2	✓	✓	✓		✓	✓		✓
BETA 12CX	✓	✓			✓	✓	✓	
BETA 12LTA	✓	✓			✓	✓	✓	
DELTA 12A AND B		✓			✓	✓	✓	
DELTA 12LFA AND C	✓	✓	✓	✓	✓	✓		✓
KAPPA 12A		✓	✓		✓	✓	✓	
ALPHA 15A	✓	✓			✓	✓	✓	
BETA 15A	✓	✓			✓	✓		✓
DELTA 15A AND B	✓	✓			✓	✓		
DELTA 15LFA	✓	✓		✓	✓			✓
GAMMA 15A-2		✓	✓		✓	✓		
KAPPA 15A AND C		✓	✓		✓	✓		
KAPPA 15LFA		✓	✓	✓	✓			✓

A = 8 Ω | B = 16 Ω | C = 4 Ω | Refer to each product's detail page for alternate impedances.

*Warranty policy may vary outside of the continental United States and Canada. Check with your local distributor for warranty details.

AMERICAN STANDARD SERIES

BETA-6A

High power 6.5" mid/bass driver for use in concert sound systems or in high power auto sound as a mid/bass or a midrange driver. Works well in tiny sealed or vented enclosures, and in infinite baffles too.



SPECIFICATION

Nominal Basket Diameter	6.5", 165 mm
Nominal Impedance*	8 Ω
Power Rating**	
Watts	175 W
Music Program	350 W
Resonance	123 Hz
Usable Frequency Range	95 Hz – 4.0 kHz
Sensitivity***	94.0 dB
Magnet Weight	30 oz.
Gap Height	.250", 6.4 mm
Voice Coil Diameter	2.0", 51 mm

THIELE & SMALL PARAMETERS*

Fs	123 Hz
Re	5.18 Ω
Le	0.43 mH
Qms	3.46
Qes	0.66
Qts	0.56
Vas	0.12 cu.ft., 3.51 liters
Vd	61.1 cc
Cms	0.15 mm/N
BL	8.13 T-M
Mms	11 grams
EBP	185
Xmax	4.50 mm
Sd	129.9 cm ²
Xlim	5.7 mm

MOUNTING INFORMATION

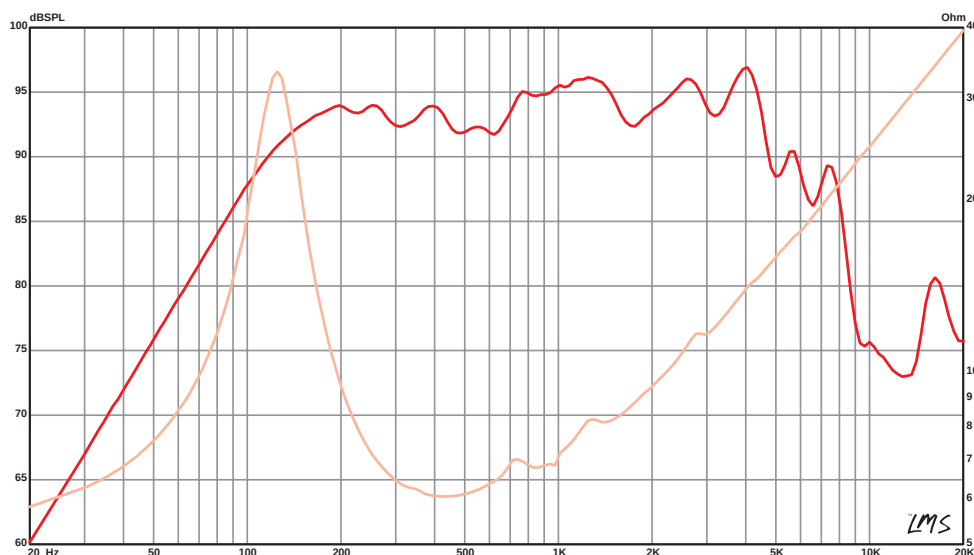
Recommended Enclosure Volume	
Sealed	2.38–9999.99 liters, 0.08–9999.99 cu.ft.
Vented	5.10–14.16 liters, 0.18–0.50 cu.ft.
Driver Volume Displaced	0.021 cu.ft., 0.60 liters
Overall Diameter	6.59", 167.4 mm
Baffle Hole Diameter	5.65", 143.5 mm
Front Sealing Gasket	Yes
Rear Sealing Gasket	Yes
Mounting Holes Diameter	0.23", 5.8 mm
Mounting Holes B.C.D.	6.06", 153.9 mm
Depth	2.66", 67.6 mm
Net Weight	5.60 lbs, 2.54 kg
Shipping Weight	6.30 lbs, 2.86 kg

MATERIALS OF CONSTRUCTION

Aluminum voice coil
Polyimide former
Ferrite magnet
Vented and extended core
Pressed steel basket
Water resistant paper cone
Treated cloth cone edge
Water resistant treated paper dust cap



FREQUENCY RESPONSE & IMPEDANCE CURVE*



* See footnotes on page 83 for information regarding usable frequency range, nominal impedance, power rating and sensitivity.

AMERICAN STANDARD SERIES

LA6-CBMR

Recommended for pro audio midrange applications from 500Hz-3kHz. Features a closed truncated basket for close spacing in line-arrays.



SPECIFICATION

Nominal Basket Diameter	6.5", 165 mm
Nominal Impedance*	8 Ω
Power Rating**	
Watts	150 W
Music Program	300 W
Resonance	460 Hz
Usable Frequency Range	500 Hz – 5.4 kHz
Sensitivity***	97.8 dB
Magnet Weight	38 oz.
Gap Height	.310", 7.9 mm
Voice Coil Diameter	1.5", 38 mm

THIELE & SMALL PARAMETERS*

Fs	460 Hz
Re	6.30 Ω
Le	0.33 mH
Qms	3.13
Qes	1.24
Qts	0.89
Vas	0.01 cu.ft., 0.40 liters
Vd	2.7 cc
Cms	0.01 mm/N
BL	11.10 T-M
Mms	9 grams
EBP	371
Xmax	0.20 mm
Sd	133.1 cm ²
Xlim	0.8 mm

MOUNTING INFORMATION

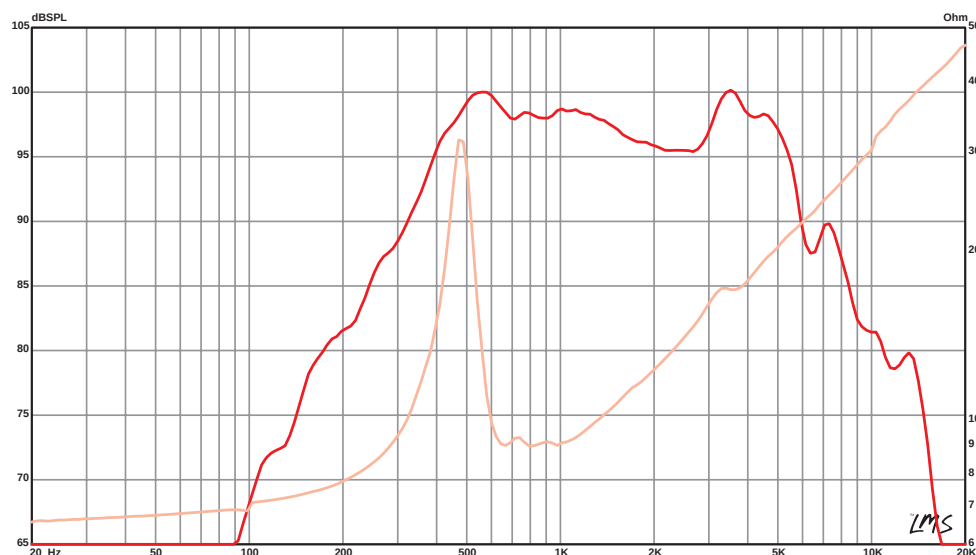
Recommended Enclosure Volume	
Sealed	N/A
Vented	N/A
Driver Volume Displaced	0.022 cu.ft., 0.62 liters
Overall Diameter	6.59", 167.4 mm
Baffle Hole Diameter	5.65", 143.5 mm
Front Sealing Gasket	Yes
Rear Sealing Gasket	N/A
Mounting Holes Diameter	0.23", 5.8 mm
Mounting Holes B.C.D.	6.06", 153.9 mm
Depth	2.77", 70.4 mm
Net Weight	6.70 lbs, 3.04 kg
Shipping Weight	7.20 lbs, 3.27 kg

MATERIALS OF CONSTRUCTION

Copper voice coil
Polyimide former
Ferrite magnet
Vented and extended core
Pressed steel basket with truncated sides
Paper cone
Cloth cone edge
Solid composition paper dust cap



FREQUENCY RESPONSE & IMPEDANCE CURVE*



* See footnotes on page 83 for information regarding usable frequency range, nominal impedance, power rating and sensitivity.

AMERICAN STANDARD SERIES

ALPHA-6A

Recommended for professional audio mid-range applications in a sealed cabinet, or as a mid-bass in a vented satellite enclosure.



SPECIFICATION

Nominal Basket Diameter	6.5", 165 mm
Nominal Impedance*	8 or 4 Ω
Power Rating**	
Watts	100 W
Music Program	200 W
Resonance	118 Hz
Usable Frequency Range	95 Hz – 6.0 kHz
Sensitivity***	93.6 dB
Magnet Weight	20 oz.
Gap Height	.250", 6.4 mm
Voice Coil Diameter	1.5", 38 mm

THIELE & SMALL PARAMETERS*

Fs	118 Hz
Re	7.20 Ω
Le	0.19 mH
Qms	5.68
Qes	0.60
Qts	0.54
Vas	0.20 cu.ft., 5.80 liters
Vd	44.0 cc
Cms	0.26 mm/N
BL	8.00 T-M
Mms	7 grams
EBP	197
Xmax	3.50 mm
Sd	126.7 cm ²
Xlim	4.0 mm

MOUNTING INFORMATION

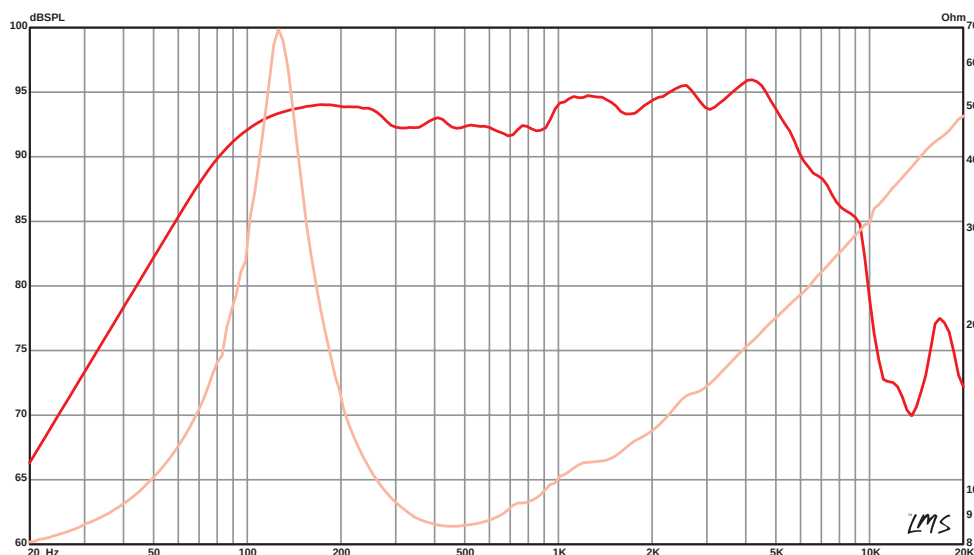
Recommended Enclosure Volume	
Sealed	2.80–5.70 liters, 0.10–0.20 cu.ft.
Vented	3.40–15.60 liters, 0.12–0.55 cu.ft.
Driver Volume Displaced	0.014 cu.ft., 0.41 liters
Overall Diameter	6.59", 167.4 mm
Baffle Hole Diameter	5.65", 143.5 mm
Front Sealing Gasket	Yes
Rear Sealing Gasket	Yes
Mounting Holes Diameter	0.23", 5.8 mm
Mounting Holes B.C.D.	6.06", 153.9 mm
Depth	2.80", 71.1 mm
Net Weight	4.10 lbs, 1.86 kg
Shipping Weight	4.80 lbs, 2.18 kg

MATERIALS OF CONSTRUCTION

Copper voice coil
Polyimide former
Ferrite magnet
Vented and extended core
Pressed steel basket
Paper cone
Cloth cone edge
Solid composition paper dust cap



FREQUENCY RESPONSE & IMPEDANCE CURVE*



* See footnotes on page 83 for information regarding usable frequency range, nominal impedance, power rating and sensitivity.

AMERICAN STANDARD SERIES

ALPHA-6CBMRA

Recommended for pro audio, car audio, and bass guitar midrange applications. Sealed basket affords this speaker enclosure independence.



SPECIFICATION

Nominal Basket Diameter	6.5", 165 mm
Nominal Impedance*	8 Ω
Power Rating**	
Watts	100 W
Music Program	200 W
Resonance	407 Hz
Usable Frequency Range	400 Hz – 5.0 kHz
Sensitivity***	97.8 dB
Magnet Weight	16 oz.
Gap Height	.250", 6.4 mm
Voice Coil Diameter	1.5", 38 mm

THIELE & SMALL PARAMETERS*

Fs	407 Hz
Re	5.26 Ω
Le	0.38 mH
Qms	6.04
Qes	1.74
Qts	1.35
Vas	0.02 cu.ft., 0.45 liters
Vd	19.0 cc
Cms	0.02 mm/N
BL	7.86 T-M
Mms	8 grams
EBP	234
Xmax	1.50 mm
Sd	126.7 cm ²
Xlim	3.0 mm

MOUNTING INFORMATION

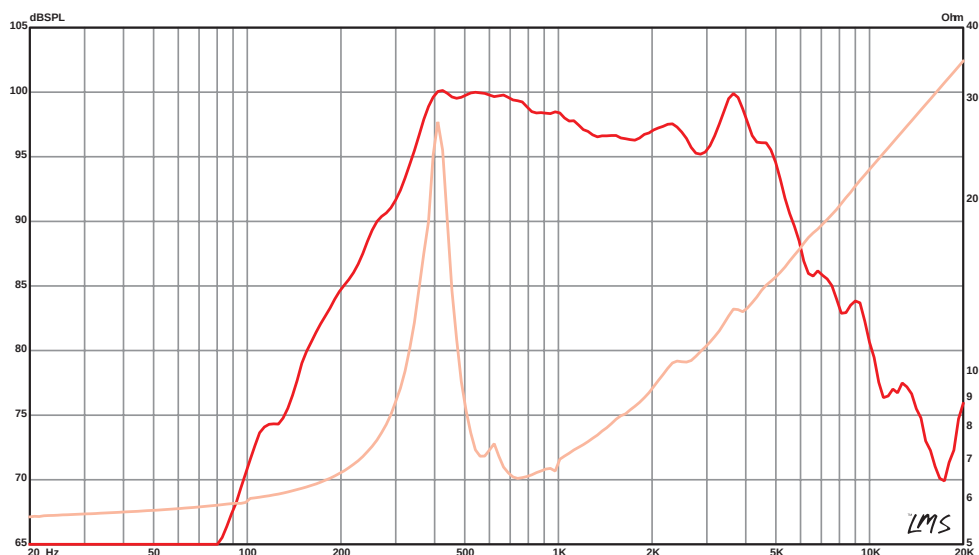
Recommended Enclosure Volume	
Sealed	N/A
Vented	N/A
Driver Volume Displaced	0.014 cu.ft., 0.40 liters
Overall Diameter	6.59", 167.4 mm
Baffle Hole Diameter	5.69", 144.5 mm
Front Sealing Gasket	Yes
Rear Sealing Gasket	Yes
Mounting Holes Diameter	0.23", 5.8 mm
Mounting Holes B.C.D.	6.06", 153.9 mm
Depth	2.20", 55.9 mm
Net Weight	3.70 lbs, 1.68 kg
Shipping Weight	4.40 lbs, 2.00 kg

MATERIALS OF CONSTRUCTION

Copper voice coil
Polyimide former
Ferrite magnet
Non-vented core
Pressed steel basket
Paper cone
Cloth cone edge
Solid composition paper dust cap



FREQUENCY RESPONSE & IMPEDANCE CURVE*



* See footnotes on page 83 for information regarding usable frequency range, nominal impedance, power rating and sensitivity.

AMERICAN STANDARD SERIES

BETA-8CX

Recommended for professional audio mid-range reproduction in sealed enclosures. Also suitable for mid-bass or floor monitor applications in vented 2-way cabinets.



The data for this coaxial woofer was calculated with the ASD:1001 driver screwed into the woofer, but not active.

SPECIFICATION

Nominal Basket Diameter	8.0", 203 mm
Nominal Impedance*	8 Ω
Power Rating**	
Watts	250 W
Music Program	500 W
Resonance	62 Hz
Usable Frequency Range	95 Hz – 3.3 kHz
Sensitivity***	92.9 dB
Magnet Weight	38 oz.
Gap Height	.312", 7.9 mm
Voice Coil Diameter	2.0", 51 mm

THIELE & SMALL PARAMETERS*

Fs	62 Hz
Re	5.37 Ω
Le	0.67 mH
Qms	6.57
Qes	0.31
Qts	0.29
Vas	0.76 cu.ft., 21.43 liters
Vd	67.2 cc
Cms	0.35 mm/N
BL	11.21 T-M
Mms	19 grams
EBP	201
Xmax	3.20 mm
Sd	210.0 cm ²
Xlim	6.9 mm

MOUNTING INFORMATION

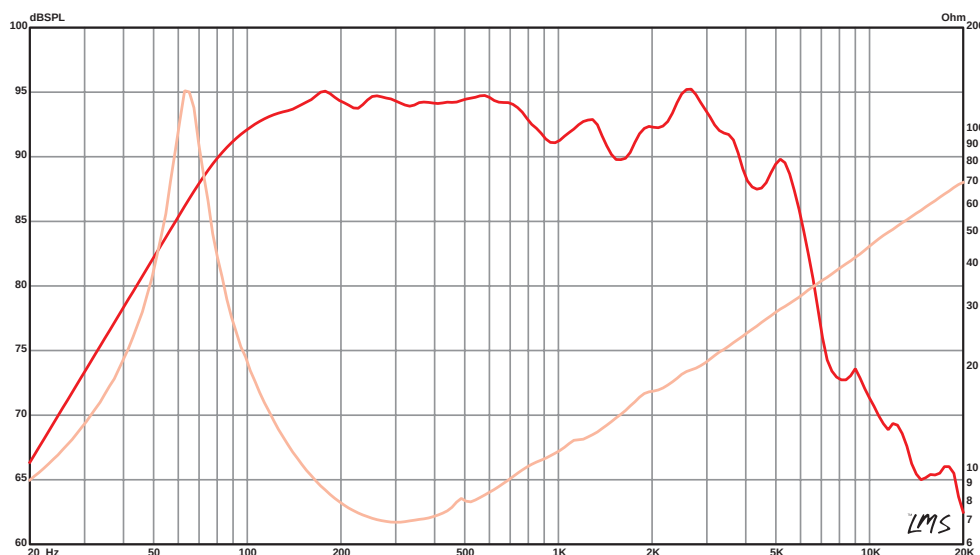
Recommended Enclosure Volume	
Sealed	3.40–9.91 liters, 0.12–0.35 cu.ft.
Vented	7.08–16.99 liters, 0.25–0.60 cu.ft.
Driver Volume Displaced	0.028 cu.ft., 0.79 liters
Overall Diameter	8.24", 209.3 mm
Baffle Hole Diameter	7.13", 181.1 mm
Front Sealing Gasket	Yes
Rear Sealing Gasket	Yes
Mounting Holes Diameter	0.22", 5.6 mm
Mounting Holes B.C.D.	7.75", 196.9 mm
Depth	3.50", 88.9 mm
Net Weight	6.80 lbs, 3.08 kg
Shipping Weight	7.50 lbs, 3.40 kg

MATERIALS OF CONSTRUCTION

Copper voice coil
Kapton former
Ferrite magnet
Tapered Coax
Pressed steel basket
Paper Cone
Sealed cloth cone edge
Zurette dust cap



FREQUENCY RESPONSE & IMPEDANCE CURVE*



* See footnotes on page 83 for information regarding usable frequency range, nominal impedance, power rating and sensitivity.

AMERICAN STANDARD SERIES

BETA-8A

Recommended for professional audio mid-bass applications or as a woofer in vented enclosures. Also suitable as a mid-bass speaker in sealed enclosures.



SPECIFICATION

Nominal Basket Diameter	8.0", 203 mm
Nominal Impedance*	8 Ω
Power Rating**	
Watts	225 W
Music Program	450 W
Resonance	65 Hz
Usable Frequency Range	78 Hz – 4.5 kHz
Sensitivity***	95.1 dB
Magnet Weight	34 oz.
Gap Height	.312", 7.9 mm
Voice Coil Diameter	2.0", 51 mm

THIELE & SMALL PARAMETERS*

Fs	65 Hz
Re	5.99 Ω
Le	0.49 mH
Qms	4.95
Qes	0.42
Qts	0.38
Vas	0.82 cu.ft., 23.30 liters
Vd	63.0 cc
Cms	0.37 mm/N
BL	9.60 T-M
Mms	16 grams
EBP	156
Xmax	3.00 mm
Sd	210.0 cm ²
Xlim	7.4 mm

MOUNTING INFORMATION

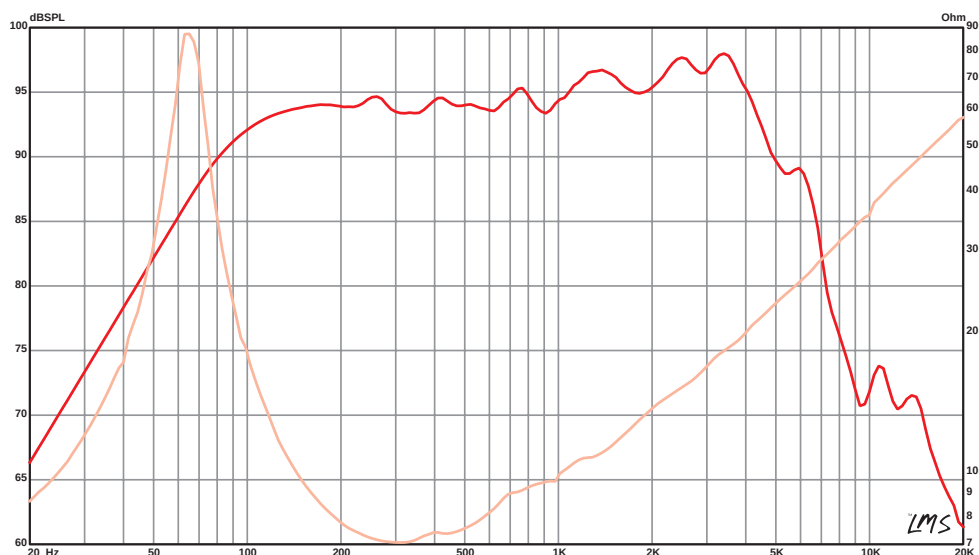
Recommended Enclosure Volume	
Sealed	5.70–9.90 liters, 0.20–0.35 cu.ft.
Vented	8.50–19.00 liters, 0.30–0.67 cu.ft.
Driver Volume Displaced	0.027 cu.ft., 0.76 liters
Overall Diameter	8.24", 209.3 mm
Baffle Hole Diameter	7.13", 181.1 mm
Front Sealing Gasket	Yes
Rear Sealing Gasket	Yes
Mounting Holes Diameter	0.22", 5.6 mm
Mounting Holes B.C.D.	7.75", 196.9 mm
Depth	3.50", 88.9 mm
Net Weight	6.60 lbs, 2.99 kg
Shipping Weight	7.40 lbs, 3.36 kg

MATERIALS OF CONSTRUCTION

Aluminum voice coil
Polyimide former
Ferrite magnet
Vented core
Pressed steel basket
Paper cone
Cloth cone edge
Solid composition paper dust cap



FREQUENCY RESPONSE & IMPEDANCE CURVE*



* See footnotes on page 83 for information regarding usable frequency range, nominal impedance, power rating and sensitivity.

AMERICAN STANDARD SERIES

ALPHA-8A

Recommended for professional audio mid-range applications in a sealed cabinet, or as a mid-bass in a vented satellite enclosure.



SPECIFICATION

Nominal Basket Diameter	8.0", 203 mm
Nominal Impedance*	8 Ω
Power Rating**	
Watts	125 W
Music Program	250 W
Resonance	73 Hz
Usable Frequency Range	58 Hz – 5.0 kHz
Sensitivity***	94.0 dB
Magnet Weight	20 oz.
Gap Height	.250", 6.4 mm
Voice Coil Diameter	1.5", 38 mm

THIELE & SMALL PARAMETERS*

Fs	73 Hz
Re	5.30 Ω
Le	0.44 mH
Qms	4.60
Qes	0.68
Qts	0.59
Vas	0.60 cu.ft., 17.70 liters
Vd	67.0 cc
Cms	0.28 mm/N
BL	7.80 T-M
Mms	17 grams
EBP	107
Xmax	3.20 mm
Sd	210.0 cm ²
Xlim	7.1 mm

MOUNTING INFORMATION

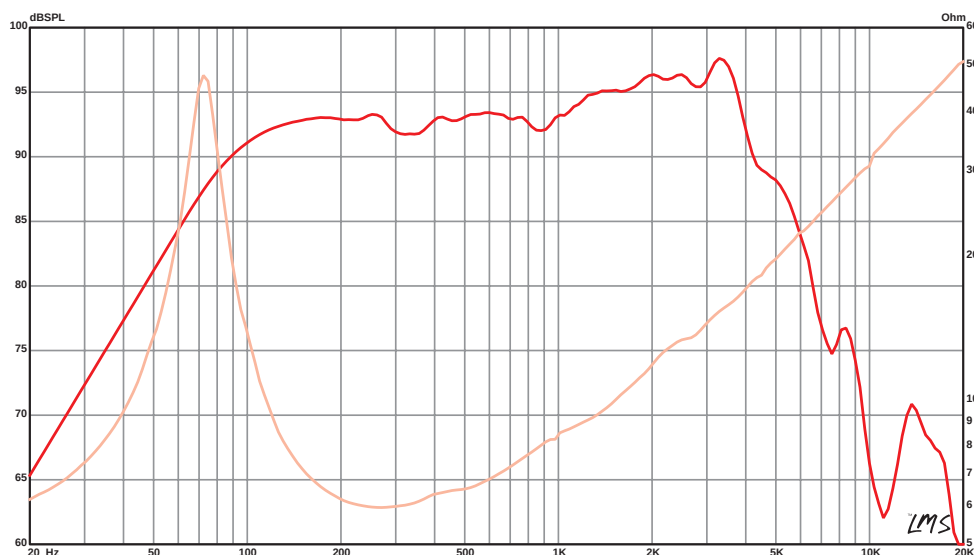
Recommended Enclosure Volume	
Sealed	5.00–7.00 liters, 0.18–0.25 cu.ft.
Vented	16.70–25.50 liters, 0.59–0.90 cu.ft.
Driver Volume Displaced	0.020 cu.ft., 0.58 liters
Overall Diameter	8.24", 209.3 mm
Baffle Hole Diameter	7.13", 181.1 mm
Front Sealing Gasket	Yes
Rear Sealing Gasket	Yes
Mounting Holes Diameter	0.22", 5.6 mm
Mounting Holes B.C.D.	7.75", 196.9 mm
Depth	3.25", 82.6 mm
Net Weight	4.30 lbs, 1.95 kg
Shipping Weight	5.10 lbs, 2.31 kg

MATERIALS OF CONSTRUCTION

Copper voice coil
Polyimide former
Ferrite magnet
Vented core
Pressed steel basket
Paper cone
Cloth cone edge
Solid composition paper dust cap



FREQUENCY RESPONSE & IMPEDANCE CURVE*



* See footnotes on page 83 for information regarding usable frequency range, nominal impedance, power rating and sensitivity.

AMERICAN STANDARD SERIES

ALPHA-8MRA

Recommended for pro audio and bass guitar applications as a midrange. Sealed basket makes this woofer independent of enclosure design.



SPECIFICATION

Nominal Basket Diameter	8.0", 203 mm
Nominal Impedance*	8 Ω
Power Rating**	
Watts	125 W
Music Program	250 W
Resonance	514 Hz
Usable Frequency Range	400 Hz – 4.8 kHz
Sensitivity***	100.9 dB
Magnet Weight	20 oz.
Gap Height	.250", 6.4 mm
Voice Coil Diameter	1.5", 38 mm

THIELE & SMALL PARAMETERS*

Fs	514 Hz
Re	7.32 Ω
Le	0.34 mH
Qms	4.48
Qes	2.08
Qts	1.42
Vas	0.03 cu.ft., 0.80 liters
Vd	0.0 cc
Cms	0.01 mm/N
BL	8.90 T-M
Mms	7 grams
EBP	247
Xmax	1.60 mm
Sd	205.9 cm ²
Xlim	3.0 mm

MOUNTING INFORMATION

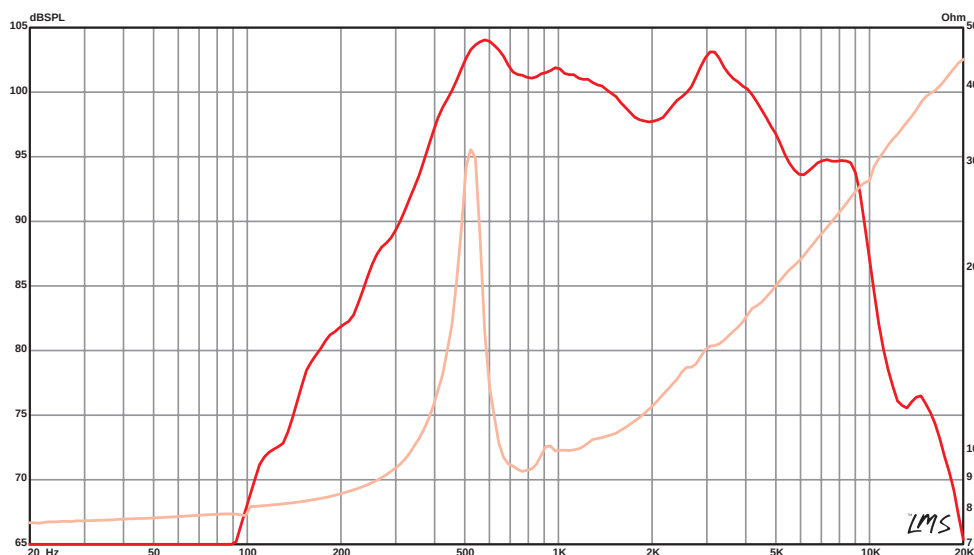
Recommended Enclosure Volume	
Sealed	N/A
Vented	N/A
Driver Volume Displaced	0.020 cu.ft., 0.58 liters
Overall Diameter	8.22", 208.8 mm
Baffle Hole Diameter	7.19", 182.6 mm
Front Sealing Gasket	Yes
Rear Sealing Gasket	Yes
Mounting Holes Diameter	0.22", 5.6 mm
Mounting Holes B.C.D.	7.78", 197.6 mm
Depth	3.25", 82.6 mm
Net Weight	4.40 lbs, 2.00 kg
Shipping Weight	5.10 lbs, 2.31 kg

MATERIALS OF CONSTRUCTION

Copper voice coil
Polyimide former
Ferrite magnet
Vented core
Pressed steel basket with closed back
Paper cone
Paper cone edge
Solid composition paper dust cap



FREQUENCY RESPONSE & IMPEDANCE CURVE*



* See footnotes on page 83 for information regarding usable frequency range, nominal impedance, power rating and sensitivity.

AMERICAN STANDARD SERIES

DELTA-10A

Recommended for professional audio and bass guitar applications as a woofer/mid-bass or midrange in vented monitors, satellites and multi-way enclosures.



SPECIFICATION

Nominal Basket Diameter	10.0", 254 mm
Nominal Impedance*	8 or 16 Ω
Power Rating**	
Watts	350 W
Music Program	700 W
Resonance	66 Hz
Usable Frequency Range	63 Hz – 3.7 kHz
Sensitivity***	98.8 dB
Magnet Weight	56 oz.
Gap Height	.375", 9.5 mm
Voice Coil Diameter	2.5", 64 mm

THIELE & SMALL PARAMETERS*

Fs	66 Hz
Re	5.42 Ω
Le	0.74 mH
Qms	6.53
Qes	0.35
Qts	0.33
Vas	1.10 cu.ft., 30.50 liters
Vd	121.0 cc
Cms	0.18 mm/N
BL	14.40 T-M
Mms	32 grams
EBP	189
Xmax	3.50 mm
Sd	344.9 cm ²
Xlim	9.4 mm

MOUNTING INFORMATION

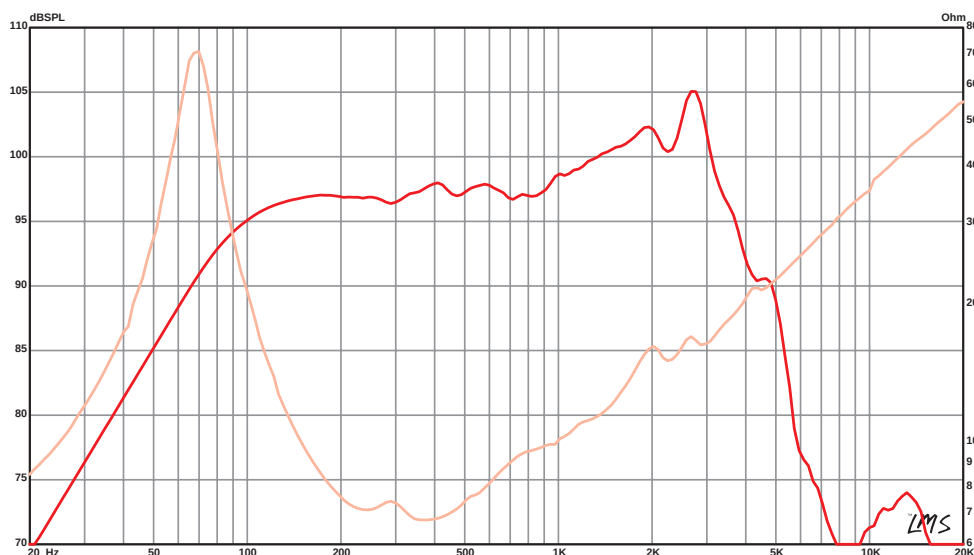
Recommended Enclosure Volume	
Sealed	N/A
Vented	12.70–37.90 liters, 0.45–1.34 cu.ft.
Driver Volume Displaced	0.050 cu.ft., 1.42 liters
Overall Diameter	10.09", 256.3 mm
Baffle Hole Diameter	9.18", 233.2 mm
Front Sealing Gasket	Yes
Rear Sealing Gasket	Yes
Mounting Holes Diameter	0.25", 6.4 mm
Mounting Holes B.C.D.	9.66", 245.4 mm
Depth	4.25", 108.0 mm
Net Weight	10.80 lbs, 4.90 kg
Shipping Weight	12.00 lbs, 5.44 kg

MATERIALS OF CONSTRUCTION

Aluminum voice coil
Polyimide former
Ferrite magnet
Vented core
Pressed steel basket
Paper cone
Cloth cone edge
Solid composition paper dust cap



FREQUENCY RESPONSE & IMPEDANCE CURVE*



* See footnotes on page 83 for information regarding usable frequency range, nominal impedance, power rating and sensitivity.

AMERICAN STANDARD SERIES

BETA-10A

Recommended for professional audio, bass guitar, mid-bass or floor monitor applications in sealed enclosures. Also works well as a mid-bass or woofer in vented enclosures.



SPECIFICATION

Nominal Basket Diameter	10.0", 254 mm
Nominal Impedance*	8 Ω
Power Rating**	
Watts	250 W
Music Program	500 W
Resonance	53 Hz
Usable Frequency Range	51 Hz – 3.8 kHz
Sensitivity***	97.0 dB
Magnet Weight	34 oz.
Gap Height	.312", 7.9 mm
Voice Coil Diameter	2.0", 51 mm

THIELE & SMALL PARAMETERS*

Fs	53 Hz
Re	5.75 Ω
Le	0.67 mH
Qms	8.14
Qes	0.52
Qts	0.49
Vas	2.10 cu.ft., 60.10 liters
Vd	103.5 cc
Cms	0.36 mm/N
BL	9.60 T-M
Mms	25 grams
EBP	102
Xmax	3.00 mm
Sd	344.9 cm ²
Xlim	8.6 mm

MOUNTING INFORMATION

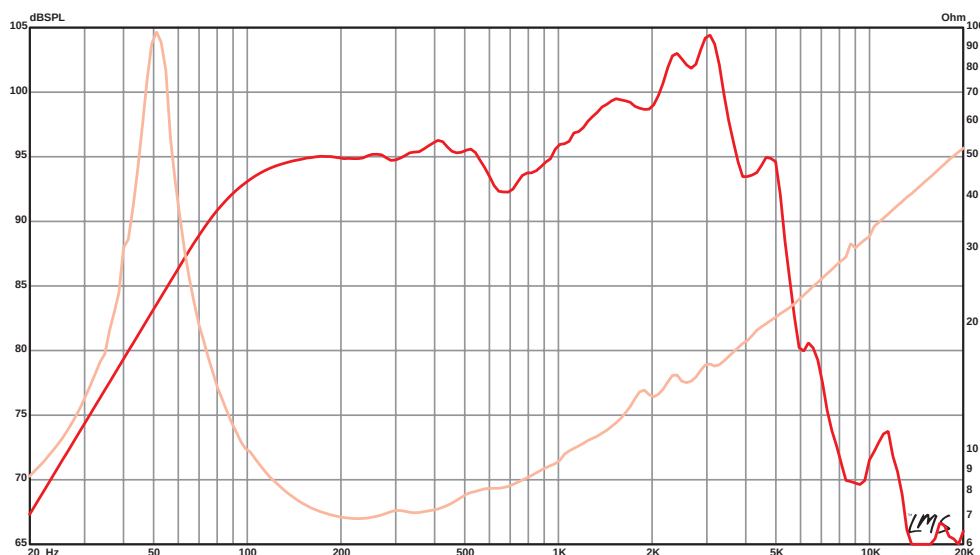
Recommended Enclosure Volume	
Sealed	8.50–14.20 liters, 0.30–0.50 cu.ft.
Vented	19.80–70.80 liters, 0.70–2.50 cu.ft.
Driver Volume Displaced	0.040 cu.ft., 1.13 liters
Overall Diameter	10.11", 256.8 mm
Baffle Hole Diameter	9.13", 231.9 mm
Front Sealing Gasket	Yes
Rear Sealing Gasket	Yes
Mounting Holes Diameter	0.23", 5.8 mm
Mounting Holes B.C.D.	9.60", 243.8 mm
Depth	3.98", 101.1 mm
Net Weight	6.80 lbs, 3.08 kg
Shipping Weight	7.80 lbs, 3.54 kg

MATERIALS OF CONSTRUCTION

Aluminum voice coil
Polyimide former
Ferrite magnet
Vented core
Pressed steel basket
Paper cone
Cloth cone edge
Solid composition paper dust cap



FREQUENCY RESPONSE & IMPEDANCE CURVE*



* See footnotes on page 83 for information regarding usable frequency range, nominal impedance, power rating and sensitivity.

AMERICAN STANDARD SERIES

BETA-10CX

Recommended for professional audio vocal wedges, or mid-bass in a sealed enclosure. Also works well in a vented enclosure as a satellite or monitor.



The data for this coaxial woofer was calculated with the ASD:1001 driver screwed into the woofer, but not active.

SPECIFICATION

Nominal Basket Diameter	10.0", 254 mm
Nominal Impedance*	8 Ω
Power Rating**	
Watts	250 W
Music Program	500 W
Resonance	49 Hz
Usable Frequency Range	60 Hz – 4.0 kHz
Sensitivity***	94.3 dB
Magnet Weight	38 oz.
Gap Height	.312", 7.9 mm
Voice Coil Diameter	2.0", 51 mm

THIELE & SMALL PARAMETERS*

Fs	49 Hz
Re	5.48 Ω
Le	0.67 mH
Qms	6.16
Qes	0.41
Qts	0.38
Vas	2.16 cu.ft., 61.10 liters
Vd	172.5 cc
Cms	0.37 mm/N
BL	10.88 T-M
Mms	29 grams
EBP	120
Xmax	5.00 mm
Sd	344.9 cm2
Xlim	7.6 mm

MOUNTING INFORMATION

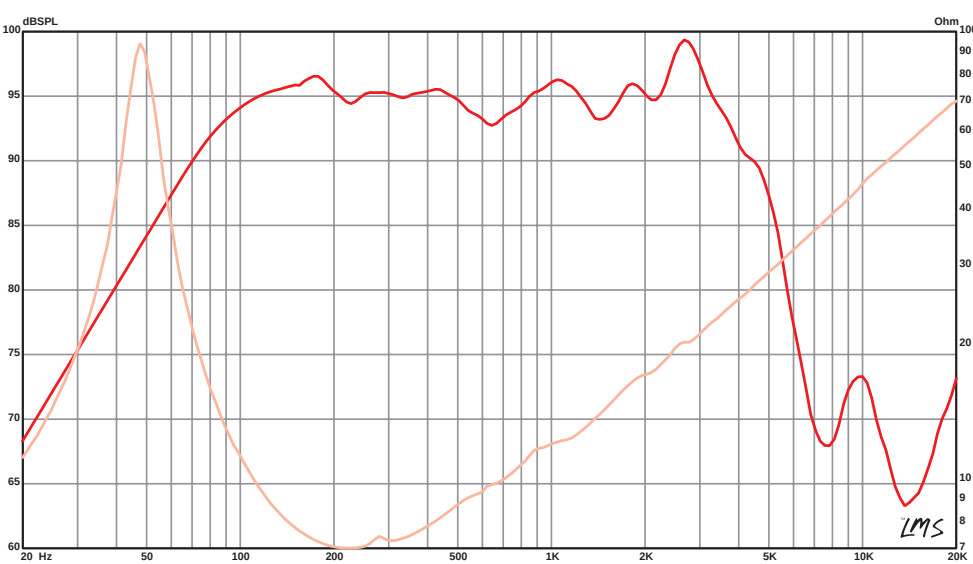
Recommended Enclosure Volume	
Sealed	14.16–42.48 liters, 0.50–1.50 cu.ft.
Vented	15.29–87.78 liters, 0.54–3.10 cu.ft.
Driver Volume Displaced	0.041 cu.ft., 1.17 liters
Overall Diameter	10.08", 256.0 mm
Baffle Hole Diameter	9.18", 233.2 mm
Front Sealing Gasket	Yes
Rear Sealing Gasket	Yes
Mounting Holes Diameter	0.25", 6.4 mm
Mounting Holes B.C.D.	9.66", 245.4 mm
Depth	3.98", 101.1 mm
Net Weight	7.30 lbs, 3.31 kg
Shipping Weight	8.40 lbs, 3.81 kg

MATERIALS OF CONSTRUCTION

- Copper voice coil
- Kapton former
- Ferrite magnet
- Tapered Coax
- Pressed steel basket
- Paper cone
- Cloth cone edge
- Zurette dust cap



FREQUENCY RESPONSE & IMPEDANCE CURVE*



* See footnotes on page 83 for information regarding usable frequency range, nominal impedance, power rating and sensitivity.

AMERICAN STANDARD SERIES

BETA-10CBMRA

Recommended for high power pro audio and car audio midrange applications. Sealed basket affords this speaker cabinet independence.



SPECIFICATION

Nominal Basket Diameter	10.0", 254 mm
Nominal Impedance*	8 Ω
Power Rating**	
Watts	200 W
Music Program	400 W
Resonance	326 Hz
Usable Frequency Range	300 Hz – 4.0 kHz
Sensitivity***	99.6 dB
Magnet Weight	34 oz.
Gap Height	.313", 8.0 mm
Voice Coil Diameter	2.0", 51 mm

THIELE & SMALL PARAMETERS*

Fs	326 Hz
Re	5.68 Ω
Le	0.48 mH
Qms	7.14
Qes	2.27
Qts	1.73
Vas	0.06 cu.ft., 1.70 liters
Vd	52.5 cc
Cms	0.01 mm/N
BL	9.50 T-M
Mms	18 grams
EBP	143
Xmax	1.50 mm
Sd	350.1 cm ²
Xlim	3.0 mm

MOUNTING INFORMATION

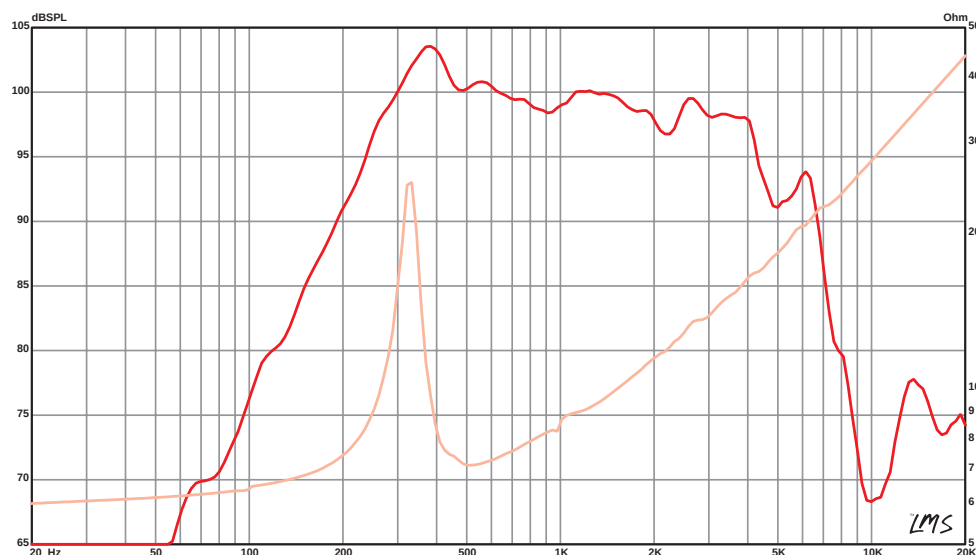
Recommended Enclosure Volume	
Sealed	N/A
Vented	N/A
Driver Volume Displaced	0.039 cu.ft., 1.10 liters
Overall Diameter	10.09", 256.3 mm
Baffle Hole Diameter	9.18", 233.2 mm
Front Sealing Gasket	Yes
Rear Sealing Gasket	Yes
Mounting Holes Diameter	0.25", 6.4 mm
Mounting Holes B.C.D.	9.66", 245.4 mm
Depth	3.56", 90.4 mm
Net Weight	7.30 lbs, 3.31 kg
Shipping Weight	8.30 lbs, 3.76 kg

MATERIALS OF CONSTRUCTION

Aluminum voice coil
Polyimide former
Ferrite magnet
Non-Vented core
Pressed steel basket
Paper cone
Cloth cone edge
Solid composition paper dust cap



FREQUENCY RESPONSE & IMPEDANCE CURVE*



* See footnotes on page 83 for information regarding usable frequency range, nominal impedance, power rating and sensitivity.

AMERICAN STANDARD SERIES

ALPHA-10A

Recommended for professional audio mid-bass applications in a small sealed cabinet.



SPECIFICATION

Nominal Basket Diameter	10.0", 254 mm
Nominal Impedance*	8 Ω
Power Rating**	
Watts	150 W
Music Program	300 W
Resonance	50 Hz
Usable Frequency Range	57 Hz – 4.5 kHz
Sensitivity***	95.6 dB
Magnet Weight	20 oz.
Gap Height	.250", 6.4 mm
Voice Coil Diameter	1.5", 38 mm

THIELE & SMALL PARAMETERS*

Fs	50 Hz
Re	5.31 Ω
Le	0.66 mH
Qms	5.21
Qes	0.66
Qts	0.59
Vas	2.90 cu.ft., 82.20 liters
Vd	114.0 cc
Cms	0.46 mm/N
BL	7.50 T-M
Mms	22 grams
EBP	76
Xmax	3.20 mm
Sd	355.4 cm ²
Xlim	9.1 mm

MOUNTING INFORMATION

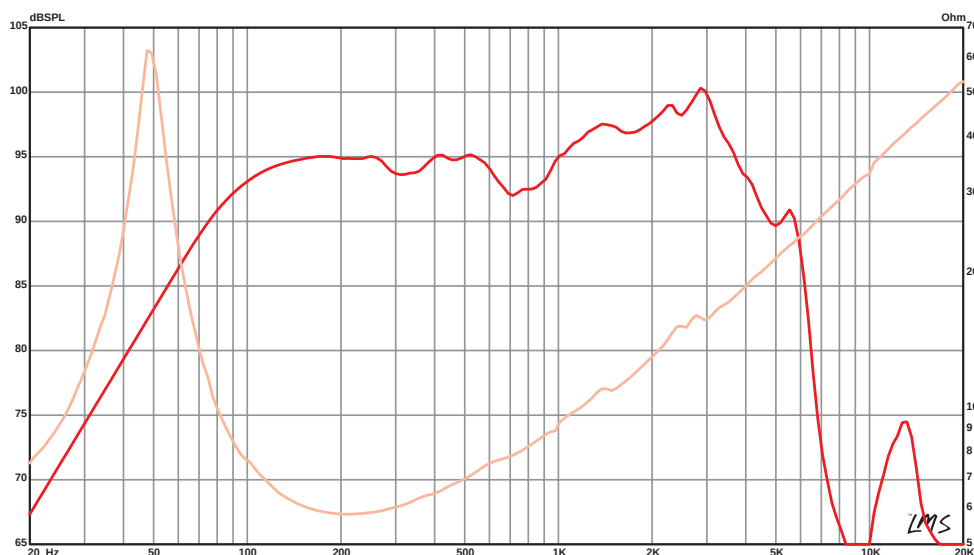
Recommended Enclosure Volume	
Sealed	8.50–11.30 liters, 0.30–0.40 cu.ft.
Vented	28.30–53.80 liters, 1.00–1.90 cu.ft.
Driver Volume Displaced	0.034 cu.ft., 0.95 liters
Overall Diameter	10.11", 256.8 mm
Baffle Hole Diameter	9.13", 231.9 mm
Front Sealing Gasket	Yes
Rear Sealing Gasket	Yes
Mounting Holes Diameter	0.23", 5.8 mm
Mounting Holes B.C.D.	9.60", 243.8 mm
Depth	3.90", 99.1 mm
Net Weight	4.50 lbs, 2.04 kg
Shipping Weight	5.60 lbs, 2.54 kg

MATERIALS OF CONSTRUCTION

Copper voice coil
Polyimide former
Ferrite magnet
Vented and extended core
Pressed steel basket
Paper cone
Cloth cone edge
Solid composition paper dust cap



FREQUENCY RESPONSE & IMPEDANCE CURVE*



* See footnotes on page 83 for information regarding usable frequency range, nominal impedance, power rating and sensitivity.

AMERICAN STANDARD SERIES

DELTA-12LFA

Low frequency woofer for pro audio mid-bass or floor monitor applications in a sealed enclosure. Also suitable as a woofer in vented, bass guitar or PA enclosures.



SPECIFICATION

Nominal Basket Diameter	12.0", 305 mm
Nominal Impedance*	8 or 4 Ω
Power Rating**	
Watts	500 W
Music Program	1000 W
Resonance	51 Hz
Usable Frequency Range	44 Hz – 3.0 kHz
Sensitivity***	94.6 dB
Magnet Weight	56 oz.
Gap Height	.375", 9.5 mm
Voice Coil Diameter	2.5", 64 mm

THIELE & SMALL PARAMETERS*

Fs	51 Hz
Re	6.06 Ω
Le	1.45 mH
Qms	7.28
Qes	0.51
Qts	0.47
Vas	2.40 cu.ft., 67.90 liters
Vd	243.0 cc
Cms	0.19 mm/N
BL	14.10 T-M
Mms	51 grams
EBP	100
Xmax	4.80 mm
Sd	506.7 cm2
Xlim	13.5 mm

MOUNTING INFORMATION

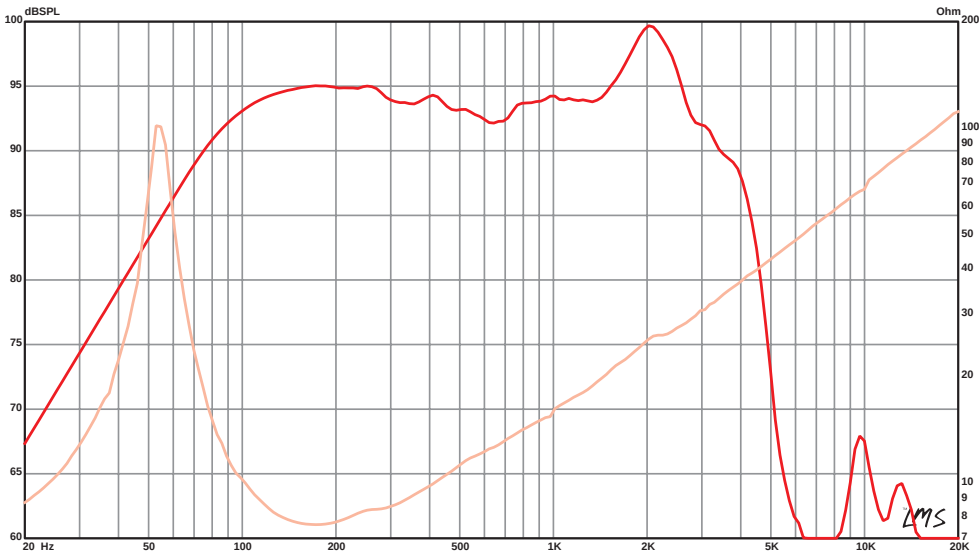
Recommended Enclosure Volume	
Sealed	19.80–28.00 liters, 0.70–1.00 cu.ft.
Vented	25.50–102.00 liters, 0.90–3.60 cu.ft.
Driver Volume Displaced	0.079 cu.ft., 2.25 liters
Overall Diameter	12.03", 305.6 mm
Baffle Hole Diameter	11.07", 281.2 mm
Front Sealing Gasket	Yes
Rear Sealing Gasket	Yes
Mounting Holes Diameter	0.25", 6.4 mm
Mounting Holes B.C.D.	11.59", 294.4 mm
Depth	5.35", 135.9 mm
Net Weight	11.80 lbs , 5.35 kg
Shipping Weight	14.00 lbs , 6.35 kg

MATERIALS OF CONSTRUCTION

- Copper voice coil
- Polyimide former
- Ferrite magnet
- Vented and extended core
- Pressed steel basket
- Paper cone
- Cloth cone edge
- Solid composition paper dust cap



FREQUENCY RESPONSE & IMPEDANCE CURVE*



* See footnotes on page 83 for information regarding usable frequency range, nominal impedance, power rating and sensitivity.

AMERICAN STANDARD SERIES

KAPPA-12A

Recommended for professional audio as a mid/hi or full range in a vented enclosure.



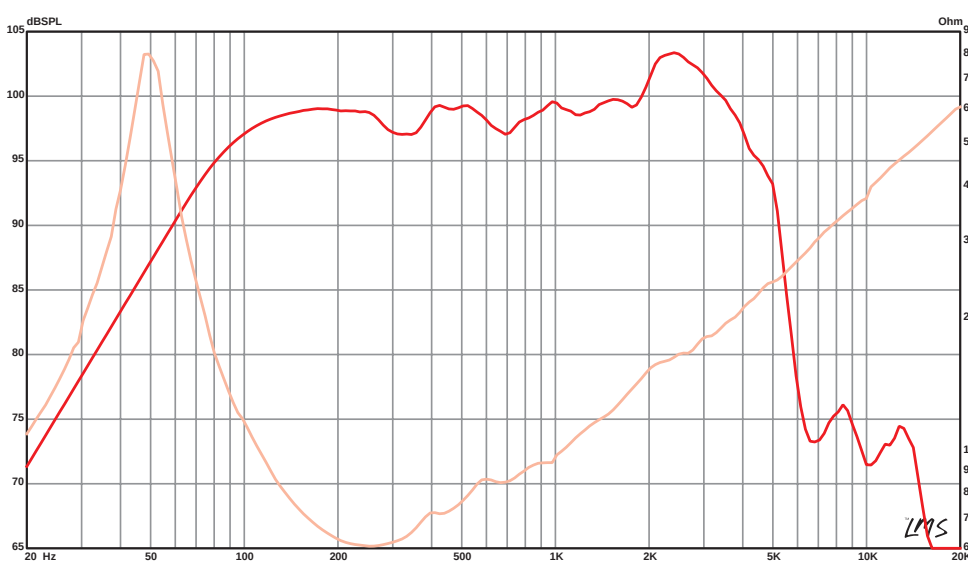
SPECIFICATION		THIELE & SMALL PARAMETERS*		MOUNTING INFORMATION	
Nominal Basket Diameter	12.0", 305 mm	Fs	45 Hz	Recommended Enclosure Volume	
Nominal Impedance*	8 Ω	Re	5.41 Ω	Sealed	
Power Rating**		Le	0.77 mH		
Watts	450 W	Qms	7.76	Vented	
Music Program	900 W	Qes	0.28	34.00–62.00 liters,	
				1.20–2.20 cu.ft.	
Resonance	45 Hz	Qts	0.27	Driver Volume Displaced	0.090 cu.ft., 2.55 liters
Usable Frequency Range	62 Hz – 4.2 kHz	Vas	4.00 cu.ft., 112.10 liters	Overall Diameter	12.26", 311.4 mm
Sensitivity***	99.3 dB	Vd	166.0 cc	Baffle Hole Diameter	11.00", 279.4 mm
Magnet Weight	80 oz.	Cms	0.30 mm/N	Front Sealing Gasket	Yes
Gap Height	.375", 9.5 mm	BL	15.20 T-M	Rear Sealing Gasket	Yes
Voice Coil Diameter	3.0", 76 mm	Mms	42 grams	Mounting Holes Diameter	0.25", 6.4 mm
		EBP	161	Mounting Holes B.C.D.	11.71", 297.4 mm
		Xmax	3.20 mm	Depth	5.63", 143.0 mm
		Sd	519.5 cm2	Net Weight	14.90 lbs , 6.76 kg
		Xlim	11.5 mm	Shipping Weight	17.90 lbs , 8.12 kg

MATERIALS OF CONSTRUCTION

- Aluminum voice coil
- Polyimide former
- Ferrite magnet
- Vented core
- Pressed steel basket
- Paper cone
- Cloth cone edge
- Solid composition paper dust cap



FREQUENCY RESPONSE & IMPEDANCE CURVE*



* See footnotes on page 83 for information regarding usable frequency range, nominal impedance, power rating and sensitivity.

AMERICAN STANDARD SERIES

DELTA-12A

Recommended for professional audio as a mid-bass or woofer (with high-pass filter) in vented enclosures.



SPECIFICATION

Nominal Basket Diameter	12.0", 305 mm
Nominal Impedance*	8 or 16 Ω
Power Rating**	
Watts	400 W
Music Program	800 W
Resonance	55 Hz
Usable Frequency Range	54 Hz – 5.0 kHz
Sensitivity***	98.3 dB
Magnet Weight	56 oz.
Gap Height	.375", 9.5 mm
Voice Coil Diameter	2.5", 64 mm

THIELE & SMALL PARAMETERS*

Fs	55 Hz
Re	6.30 Ω
Le	0.74 mH
Qms	5.27
Qes	0.46
Qts	0.43
Vas	2.90 cu.ft., 81.30 liters
Vd	125.0 cc
Cms	0.21 mm/N
BL	13.50 T-M
Mms	39 grams
EBP	120
Xmax	2.40 mm
Sd	519.5 cm2
Xlim	9.9 mm

MOUNTING INFORMATION

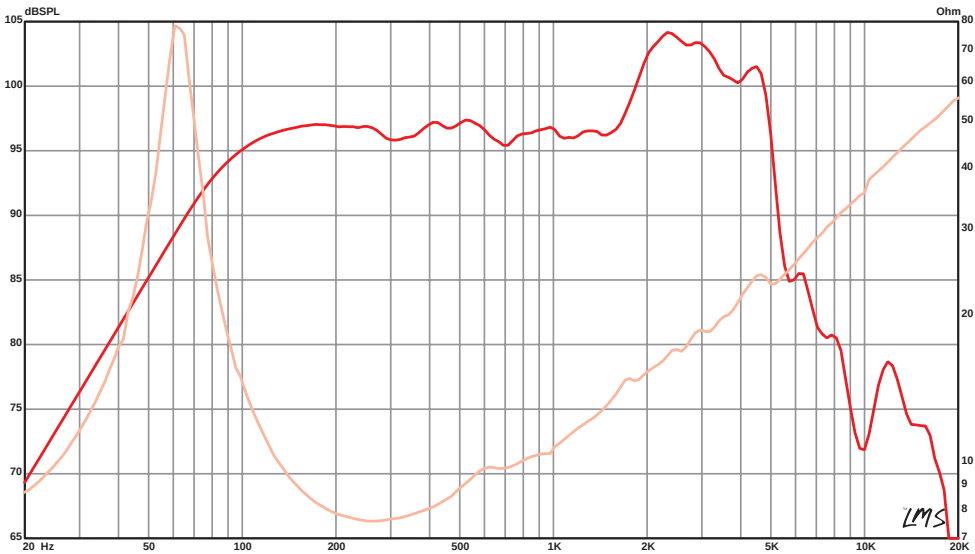
Recommended Enclosure Volume	
Sealed	N/A
Vented	25.50–85.00 liters, 0.90–3.00 cu.ft.
Driver Volume Displaced	0.079 cu.ft., 2.25 liters
Overall Diameter	12.03", 305.6 mm
Baffle Hole Diameter	11.07", 281.2 mm
Front Sealing Gasket	Yes
Rear Sealing Gasket	Yes
Mounting Holes Diameter	0.25", 6.4 mm
Mounting Holes B.C.D.	11.59", 294.4 mm
Depth	5.35", 135.9 mm
Net Weight	11.40 lbs , 5.17 kg
Shipping Weight	13.50 lbs , 6.12 kg

MATERIALS OF CONSTRUCTION

- Aluminum voice coil
- Polyimide former
- Ferrite magnet
- Vented core
- Pressed steel basket
- Paper cone
- Cloth cone edge
- Solid composition felt dust cap



FREQUENCY RESPONSE & IMPEDANCE CURVE*



* See footnotes on page 83 for information regarding usable frequency range, nominal impedance, power rating and sensitivity.

AMERICAN STANDARD SERIES

BETA-12A-2

Recommended for professional audio and bass guitar applications as a woofer in a vented enclosure. Also works well for PA in a sealed or bandpass enclosure.



SPECIFICATION

Nominal Basket Diameter	12.0", 305 mm
Nominal Impedance*	8 Ω
Power Rating**	
Watts	250 W
Music Program	500 W
Resonance	47 Hz
Usable Frequency Range	43 Hz – 3.8 kHz
Sensitivity***	98.0 dB
Magnet Weight	38 oz.
Gap Height	.312", 7.9 mm
Voice Coil Diameter	2.0", 51 mm

THIELE & SMALL PARAMETERS*

Fs	47 Hz
Re	5.00 Ω
Le	0.64 mH
Qms	6.00
Qes	0.50
Qts	0.46
Vas	4.20 cu.ft., 120.10 liters
Vd	237.0 cc
Cms	0.29 mm/N
BL	10.80 T-M
Mms	40 grams
EBP	94
Xmax	4.40 mm
Sd	538.9 cm ²
Xlim	11.0 mm

MOUNTING INFORMATION

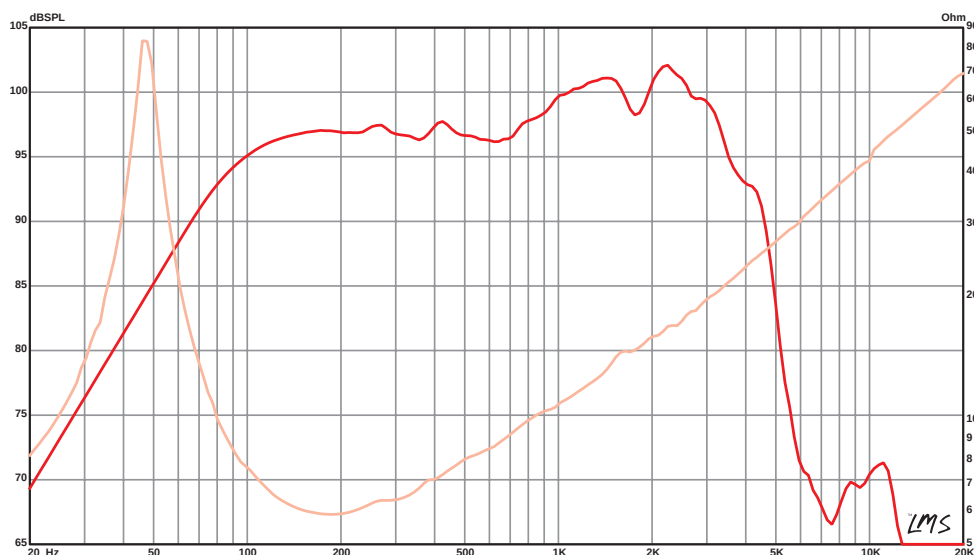
Recommended Enclosure Volume	
Sealed	25.50–35.40 liters, 0.90–1.25 cu.ft.
Vented	36.80–139.00 liters, 1.30–4.90 cu.ft.
Driver Volume Displaced	0.071 cu.ft., 2.00 liters
Overall Diameter	12.03", 305.6 mm
Baffle Hole Diameter	11.07", 281.2 mm
Front Sealing Gasket	Yes
Rear Sealing Gasket	Yes
Mounting Holes Diameter	0.25", 6.4 mm
Mounting Holes B.C.D.	11.59", 294.4 mm
Depth	4.57", 116.1 mm
Net Weight	7.50 lbs, 3.40 kg
Shipping Weight	9.70 lbs, 4.40 kg

MATERIALS OF CONSTRUCTION

Copper voice coil
Polyimide former
Ferrite magnet
Vented and extended core
Pressed steel basket
Paper cone
Cloth cone edge
Solid composition paper dust cap



FREQUENCY RESPONSE & IMPEDANCE CURVE*



* See footnotes on page 83 for information regarding usable frequency range, nominal impedance, power rating and sensitivity.

AMERICAN STANDARD SERIES

BETA-12CX

Recommended for professional audio as a mid-bass in either vented, or sealed satellite or floor monitor enclosures. Also works nicely in vented two-way enclosures used for small coverage areas.



The data for this coaxial woofer was calculated with the ASD:1001 driver screwed into the woofer, but not active.

SPECIFICATION

Nominal Basket Diameter	12.0", 305 mm
Nominal Impedance*	8 Ω
Power Rating**	
Watts	250 W
Music Program	500 W
Resonance	47 Hz
Usable Frequency Range	57 Hz – 4.6 kHz
Sensitivity***	97.3 dB
Magnet Weight	38 oz.
Gap Height	.312", 7.9 mm
Voice Coil Diameter	2.0", 51 mm

THIELE & SMALL PARAMETERS*

Fs	47 Hz
Re	5.42 Ω
Le	0.64 mH
Qms	5.64
Qes	0.52
Qts	0.48
Vas	4.27 cu.ft., 120.94 liters
Vd	188.6 cc
Cms	0.30 mm/N
BL	10.79 T-M
Mms	38 grams
EBP	90
Xmax	3.50 mm
Sd	538.9 cm ²
Xlim	10.4 mm

MOUNTING INFORMATION

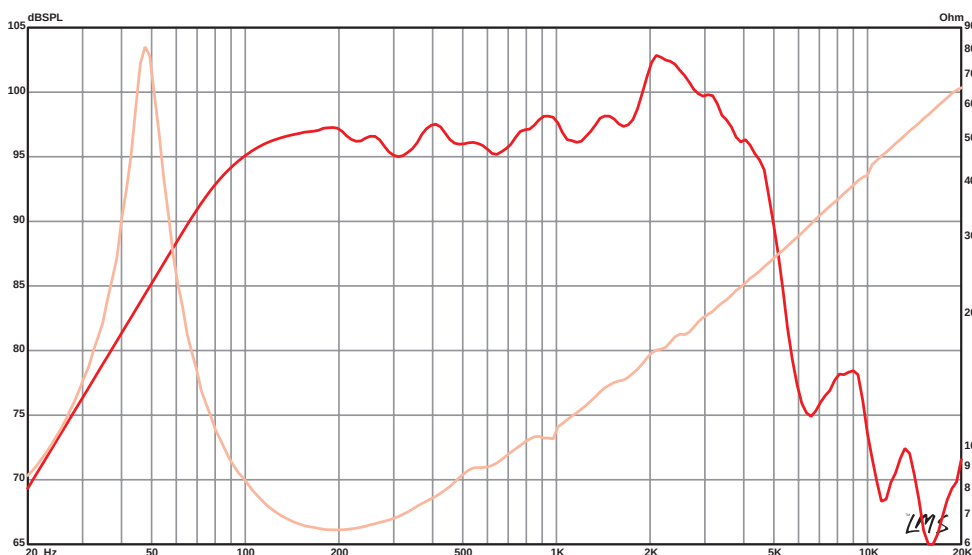
Recommended Enclosure Volume	
Sealed	26.90–70.79 liters, 0.95–2.50 cu.ft.
Vented	32.85–158.58 liters, 1.16–5.60 cu.ft.
Driver Volume Displaced	0.071 cu.ft., 2.00 liters
Overall Diameter	12.03", 305.6 mm
Baffle Hole Diameter	11.07", 281.2 mm
Front Sealing Gasket	Yes
Rear Sealing Gasket	Yes
Mounting Holes Diameter	0.25", 6.4 mm
Mounting Holes B.C.D.	11.59", 294.4 mm
Depth	4.47", 113.5 mm
Net Weight	7.80 lbs, 3.54 kg
Shipping Weight	10.00 lbs, 4.54 kg

MATERIALS OF CONSTRUCTION

Copper voice coil
Kapton former
Ferrite magnet
Tapered Coax
Pressed steel basket
Paper cone
Cloth cone edge
Screened cloth dust cap



FREQUENCY RESPONSE & IMPEDANCE CURVE*



* See footnotes on page 83 for information regarding usable frequency range, nominal impedance, power rating and sensitivity.

AMERICAN STANDARD SERIES

BETA-12LTA

Recommended for professional audio as a woofer in small sealed monitors, or as a PA woofer or monitor in a vented enclosure.



SPECIFICATION

Nominal Basket Diameter	12.0", 305 mm
Nominal Impedance*	8 Ω
Power Rating**	
Watts	225 W
Music Program	450 W
Resonance	45 Hz
Usable Frequency Range	48 Hz – 8.0 kHz
Sensitivity***	97.7 dB
Magnet Weight	38 oz.
Gap Height	.312", 7.9 mm
Voice Coil Diameter	2.0", 51 mm

THIELE & SMALL PARAMETERS*

Fs	45 Hz
Re	7.37 Ω
Le	0.83 mH
Qms	6.44
Qes	0.55
Qts	0.51
Vas	4.80 cu.ft., 136.30 liters
Vd	170.0 cc
Cms	0.34 mm/N
BL	11.70 T-M
Mms	36 grams
EBP	82
Xmax	3.20 mm
Sd	532.4 cm ²
Xlim	8.0 mm

MOUNTING INFORMATION

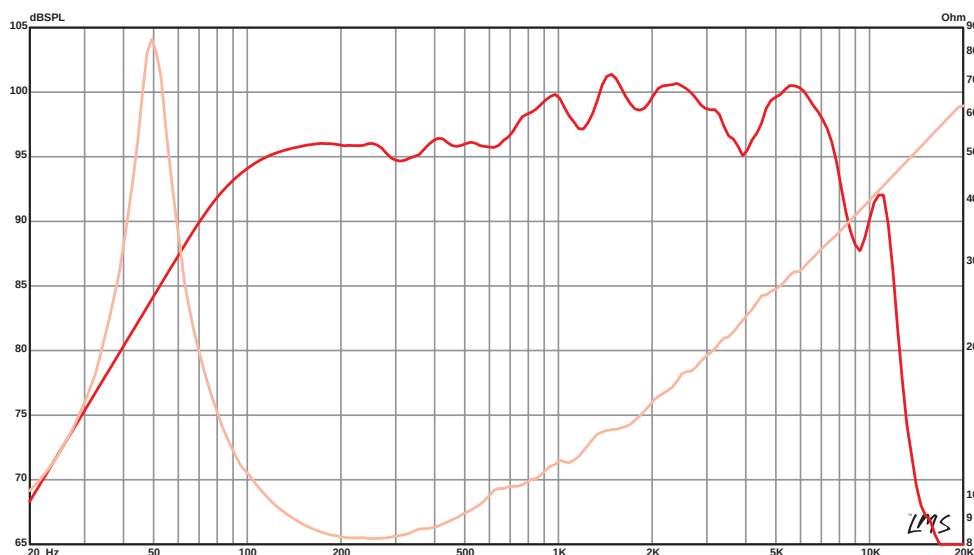
Recommended Enclosure Volume	
Sealed	14.00–51.00 liters, 0.50–1.80 cu.ft.
Vented	56.60–116.00 liters, 2.00–4.10 cu.ft.
Driver Volume Displaced	0.071 cu.ft., 2.00 liters
Overall Diameter	12.03", 305.6 mm
Baffle Hole Diameter	11.07", 281.2 mm
Front Sealing Gasket	Yes
Rear Sealing Gasket	Yes
Mounting Holes Diameter	0.25", 6.4 mm
Mounting Holes B.C.D.	11.59", 294.4 mm
Depth	4.47", 113.5 mm
Net Weight	8.10 lbs, 3.67 kg
Shipping Weight	10.20 lbs, 4.63 kg

MATERIALS OF CONSTRUCTION

Copper voice coil
Polyimide former
Ferrite magnet
Vented core
Pressed steel basket
Paper cone
Cloth cone edge
Solid composition paper dust cap



FREQUENCY RESPONSE & IMPEDANCE CURVE*



* See footnotes on page 83 for information regarding usable frequency range, nominal impedance, power rating and sensitivity.

AMERICAN STANDARD SERIES

ALPHA-12A

Recommended for professional audio mid-bass applications in a small sealed or medium vented enclosure.



SPECIFICATION

Nominal Basket Diameter	12.0", 305 mm
Nominal Impedance*	8 Ω
Power Rating**	
Watts	150 W
Music Program	300 W
Resonance	49 Hz
Usable Frequency Range	51 Hz – 4.3 kHz
Sensitivity***	95.6 dB
Magnet Weight	20 oz.
Gap Height	.250", 6.4 mm
Voice Coil Diameter	1.5", 38 mm

THIELE & SMALL PARAMETERS*

Fs	49 Hz
Re	6.30 Ω
Le	0.79 mH
Qms	6.53
Qes	0.88
Qts	0.77
Vas	4.30 cu.ft., 121.50 liters
Vd	125.0 cc
Cms	0.32 mm/N
BL	8.50 T-M
Mms	33 grams
EBP	56
Xmax	2.40 mm
Sd	519.5 cm2
Xlim	6.6 mm

MOUNTING INFORMATION

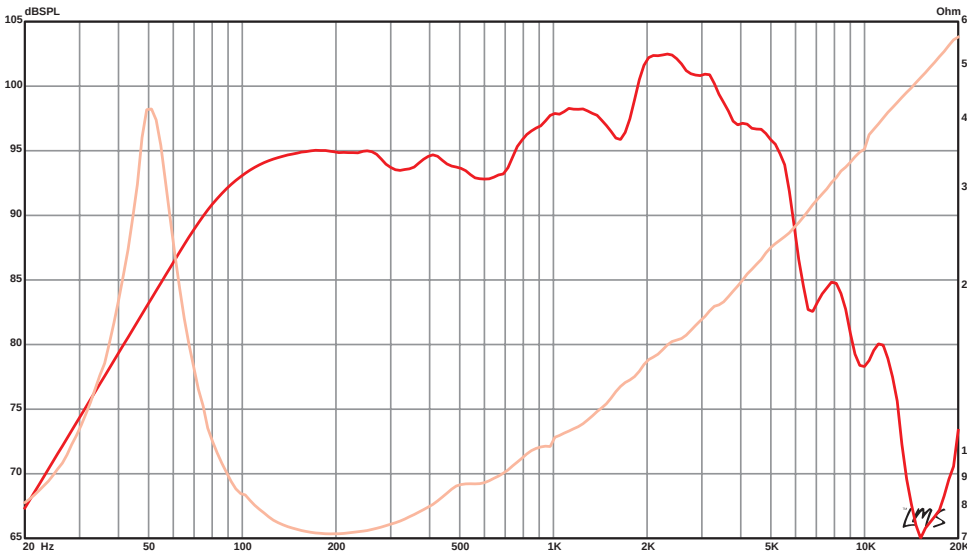
Recommended Enclosure Volume	
Sealed	17.00–22.70 liters, 0.60–0.80 cu.ft.
Vented	56.60–113.30 liters, 2.00–4.00 cu.ft.
Driver Volume Displaced	0.063 cu.ft., 1.78 liters
Overall Diameter	12.26", 311.4 mm
Baffle Hole Diameter	11.06", 280.9 mm
Front Sealing Gasket	Yes
Rear Sealing Gasket	Yes
Mounting Holes Diameter	0.25", 6.4 mm
Mounting Holes B.C.D.	11.71", 297.4 mm
Depth	4.73", 120.1 mm
Net Weight	5.30 lbs , 2.40 kg
Shipping Weight	7.40 lbs , 3.36 kg

MATERIALS OF CONSTRUCTION

- Copper voice coil
- Polyimide former
- Ferrite magnet
- Vented and extended core
- Pressed steel basket
- Paper cone
- Cloth cone edge
- Solid composition felt dust cap



FREQUENCY RESPONSE & IMPEDANCE CURVE*



* See footnotes on page 83 for information regarding usable frequency range, nominal impedance, power rating and sensitivity.

AMERICAN STANDARD SERIES

KAPPA-15LFA

Low frequency woofer for pro audio in a vented mid-bass or bass enclosure. Also suitable for bass guitar.



SPECIFICATION

Nominal Basket Diameter	15.0", 381 mm
Nominal Impedance*	8 Ω
Power Rating**	
Watts	600 W
Music Program	1200 W
Resonance	39 Hz
Usable Frequency Range	38 Hz – 2.7 kHz
Sensitivity***	99.0 dB
Magnet Weight	95 oz.
Gap Height	.375", 9.5 mm
Voice Coil Diameter	3.0", 76 mm

THIELE & SMALL PARAMETERS*

Fs	39 Hz
Re	5.40 Ω
Le	1.27 mH
Qms	6.08
Qes	0.41
Qts	0.38
Vas	5.60 cu.ft., 159.00 liters
Vd	471.0 cc
Cms	0.15 mm/N
BL	18.60 T-M
Mms	105 grams
EBP	95
Xmax	5.50 mm
Sd	856.3 cm ²
Xlim	10.4 mm

MOUNTING INFORMATION

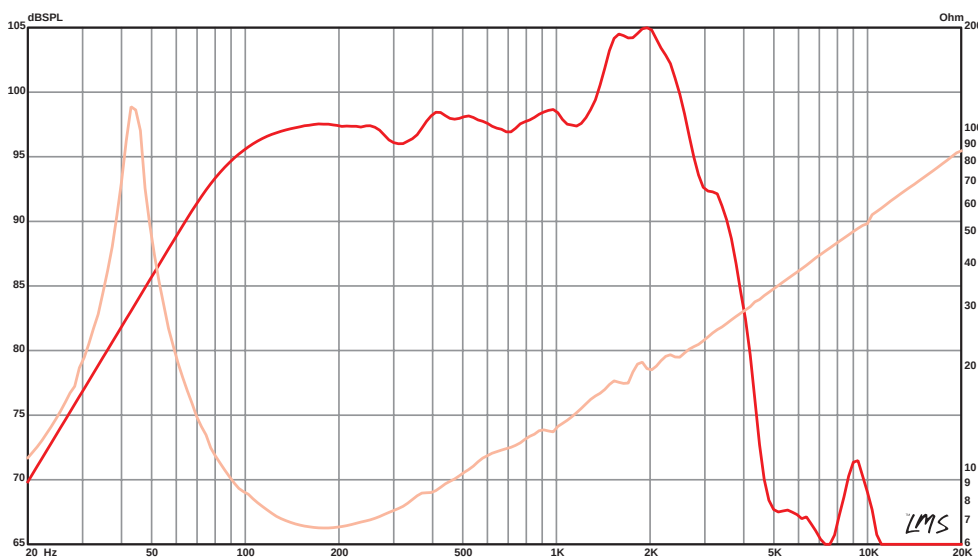
Recommended Enclosure Volume	
Sealed	N/A
Vented	62.00–193.00 liters, 2.20–6.80 cu.ft.
Driver Volume Displaced	0.145 cu.ft., 4.12 liters
Overall Diameter	15.16", 385.1 mm
Baffle Hole Diameter	13.87", 352.3 mm
Front Sealing Gasket	Yes
Rear Sealing Gasket	Yes
Mounting Holes Diameter	0.25", 6.4 mm
Mounting Holes B.C.D.	14.56", 369.8 mm
Depth	6.38", 162.1 mm
Net Weight	20.00 lbs, 9.07 kg
Shipping Weight	22.30 lbs, 10.12 kg

MATERIALS OF CONSTRUCTION

Copper voice coil
Polyimide former
Ferrite magnet
Vented core
Pressed steel basket
Paper cone
Cloth cone edge
Solid composition paper dust cap



FREQUENCY RESPONSE & IMPEDANCE CURVE*



* See footnotes on page 83 for information regarding usable frequency range, nominal impedance, power rating and sensitivity.

AMERICAN STANDARD SERIES

DELTA-15LFA

Low frequency woofer for pro audio as a mid-bass or floor monitor in a sealed enclosure. Also suitable as a woofer in vented, bass guitar or PA enclosures.



SPECIFICATION

Nominal Basket Diameter	15.0", 381 mm
Nominal Impedance*	8 Ω
Power Rating**	
Watts	500 W
Music Program	1000 W
Resonance	39 Hz
Usable Frequency Range	42 Hz – 3.2 kHz
Sensitivity***	96.0 dB
Magnet Weight	56 oz.
Gap Height	.375", 9.5 mm
Voice Coil Diameter	2.5", 64 mm

THIELE & SMALL PARAMETERS*

Fs	39 Hz
Re	6.11 Ω
Le	1.37 mH
Qms	6.30
Qes	0.52
Qts	0.48
Vas	8.51 cu.ft., 241.00 liters
Vd	419.0 cc
Cms	0.23 mm/N
BL	14.60 T-M
Mms	75 grams
EBP	75
Xmax	4.80 mm
Sd	873.0 cm ²
Xlim	16.5 mm

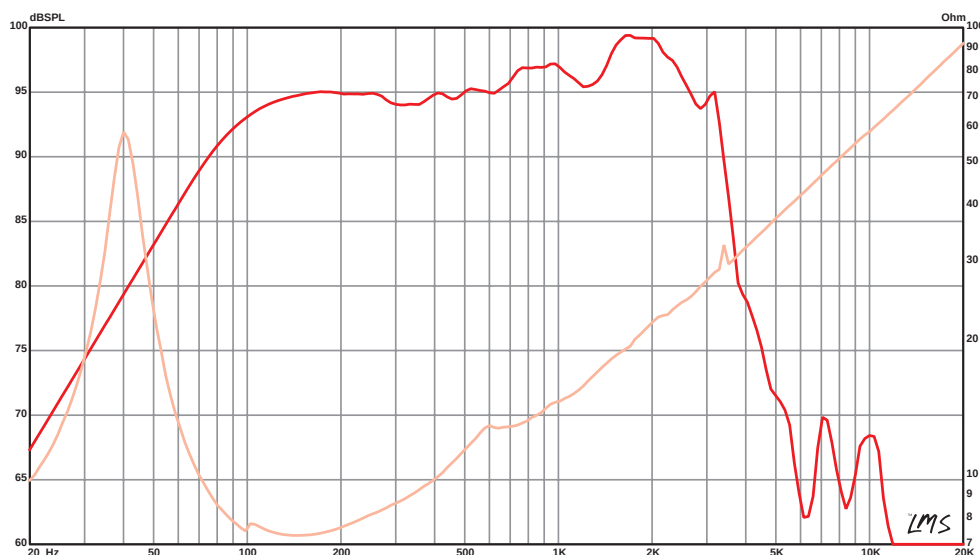
MOUNTING INFORMATION

Recommended Enclosure Volume	
Sealed	36.80–42.50 liters, 1.30–1.50 cu.ft.
Vented	85.00–167.00 liters, 3.00–5.90 cu.ft.
Driver Volume Displaced	0.128 cu.ft., 3.62 liters
Overall Diameter	15.15", 384.8 mm
Baffle Hole Diameter	13.87", 352.3 mm
Front Sealing Gasket	Yes
Rear Sealing Gasket	Yes
Mounting Holes Diameter	0.25", 6.4 mm
Mounting Holes B.C.D.	14.56", 369.8 mm
Depth	6.30", 160.0 mm
Net Weight	12.80 lbs, 5.81 kg
Shipping Weight	14.80 lbs, 6.71 kg

MATERIALS OF CONSTRUCTION

Copper voice coil
Polyimide former
Ferrite magnet
Vented and extended core
Pressed steel basket
Paper cone
Cloth cone edge
Solid composition paper dust cap

FREQUENCY RESPONSE & IMPEDANCE CURVE*



* See footnotes on page 83 for information regarding usable frequency range, nominal impedance, power rating and sensitivity.

AMERICAN STANDARD SERIES

KAPPA-15A

Recommended for professional audio in a vented mid-bass or bass enclosure. Also suitable for bass guitar.



SPECIFICATION

Nominal Basket Diameter	15.0", 381 mm
Nominal Impedance*	8 or 4 Ω
Power Rating**	
Watts	450 W
Music Program	900 W
Resonance	33 Hz
Usable Frequency Range	52 Hz – 2.3 kHz
Sensitivity***	100.5 dB
Magnet Weight	80 oz.
Gap Height	.375", 9.5 mm
Voice Coil Diameter	3.0", 76 mm

THIELE & SMALL PARAMETERS*

Fs	33 Hz
Re	5.22 Ω
Le	1.05 mH
Qms	8.90
Qes	0.33
Qts	0.32
Vas	11.35 cu.ft., 321.30 liters
Vd	343.0 cc
Cms	0.31 mm/N
BL	15.70 T-M
Mms	76 grams
EBP	98
Xmax	4.00 mm
Sd	856.3 cm ²
Xlim	11.6 mm

MOUNTING INFORMATION

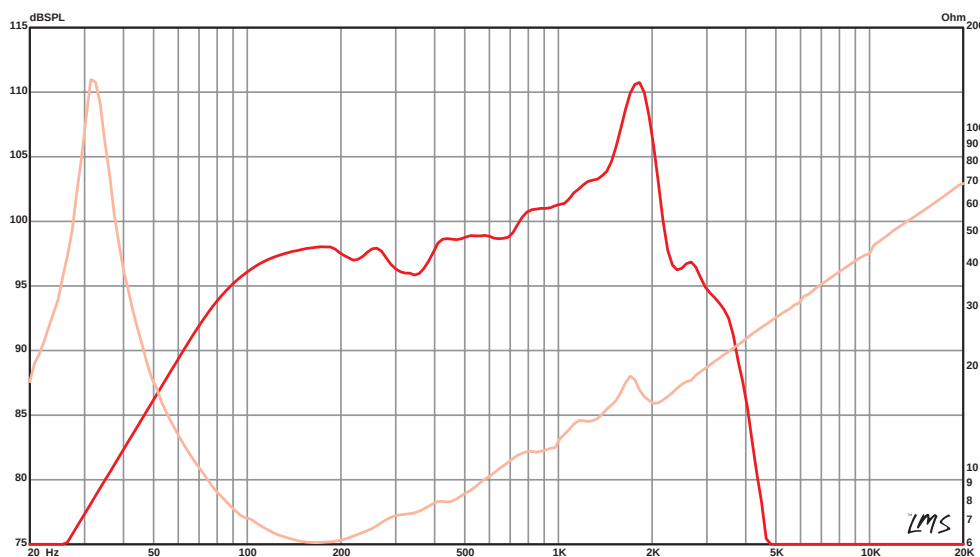
Recommended Enclosure Volume	
Sealed	N/A
Vented	45.00–113.00 liters, 1.60–4.00 cu.ft.
Driver Volume Displaced	0.138 cu.ft., 3.92 liters
Overall Diameter	15.16", 385.1 mm
Baffle Hole Diameter	13.87", 352.3 mm
Front Sealing Gasket	Yes
Rear Sealing Gasket	Yes
Mounting Holes Diameter	0.25", 6.4 mm
Mounting Holes B.C.D.	14.56", 369.8 mm
Depth	6.13", 155.7 mm
Net Weight	17.60 lbs, 7.98 kg
Shipping Weight	19.80 lbs, 8.98 kg

MATERIALS OF CONSTRUCTION

Copper voice coil
Polyimide former
Ferrite magnet
Vented core
Pressed steel basket
Paper cone
Cloth cone edge
Solid composition paper dust cap



FREQUENCY RESPONSE & IMPEDANCE CURVE*



* See footnotes on page 83 for information regarding usable frequency range, nominal impedance, power rating and sensitivity.

AMERICAN STANDARD SERIES

DELTA-15A

Recommended for professional audio as a mid-bass or vocal wedge in a sealed enclosure. Also suitable as a mid-bass or woofer in vented enclosures.



SPECIFICATION

Nominal Basket Diameter	15.0", 381 mm
Nominal Impedance*	8 or 16 Ω
Power Rating**	
Watts	400 W
Music Program	800 W
Resonance	40 Hz
Usable Frequency Range	48 Hz – 4.0 kHz
Sensitivity***	100.0 dB
Magnet Weight	56 oz.
Gap Height	.375", 9.5 mm
Voice Coil Diameter	2.5", 64 mm

THIELE & SMALL PARAMETERS*

Fs	40 Hz
Re	6.30 Ω
Le	0.64 mH
Qms	8.05
Qes	0.57
Qts	0.53
Vas	9.56 cu.ft., 270.70 liters
Vd	233.0 cc
Cms	0.26 mm/N
BL	13.20 T-M
Mms	62 grams
EBP	70
Xmax	2.70 mm
Sd	864.6 cm ²
Xlim	11.1 mm

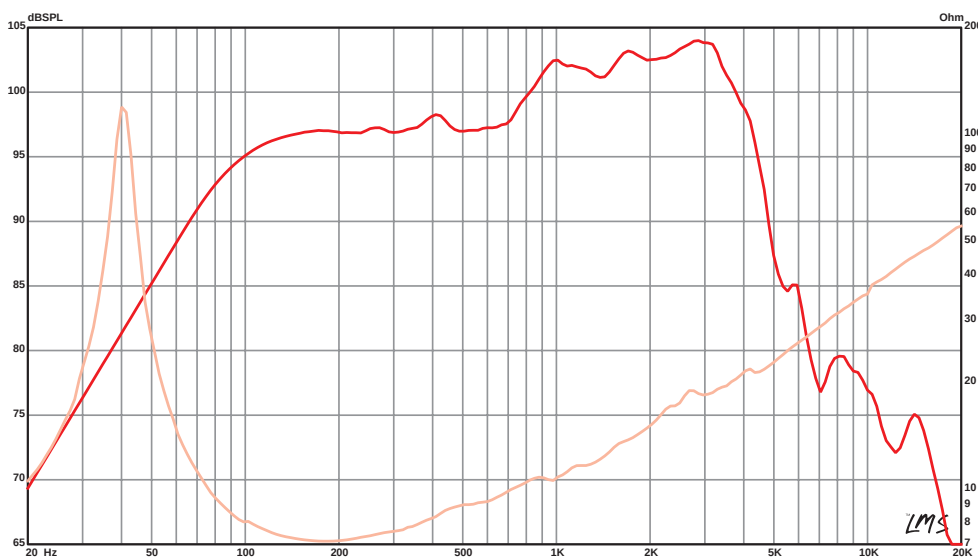
MOUNTING INFORMATION

Recommended Enclosure Volume	
Sealed	37.00–42.50 liters, 1.30–1.50 cu.ft.
Vented	82.00–161.40 liters, 2.90–5.70 cu.ft.
Driver Volume Displaced	0.128 cu.ft., 3.62 liters
Overall Diameter	15.15", 384.8 mm
Baffle Hole Diameter	13.87", 352.3 mm
Front Sealing Gasket	Yes
Rear Sealing Gasket	Yes
Mounting Holes Diameter	0.25", 6.4 mm
Mounting Holes B.C.D.	14.56", 369.8 mm
Depth	6.05", 153.7 mm
Net Weight	12.30 lbs, 5.58 kg
Shipping Weight	14.40 lbs, 6.53 kg

MATERIALS OF CONSTRUCTION

Aluminum voice coil
Polyimide former
Ferrite magnet
Vented core
Pressed steel basket
Paper cone
Cloth cone edge
Solid composition paper dust cap

FREQUENCY RESPONSE & IMPEDANCE CURVE*



* See footnotes on page 83 for information regarding usable frequency range, nominal impedance, power rating and sensitivity.

AMERICAN STANDARD SERIES

BETA-15A

Recommended for professional audio as a woofer in sealed and vented enclosures.



SPECIFICATION

Nominal Basket Diameter	15.0", 381 mm
Nominal Impedance*	8 Ω
Power Rating**	
Watts	300 W
Music Program	600 W
Resonance	35 Hz
Usable Frequency Range	45 Hz – 3.7 kHz
Sensitivity***	98.2 dB
Magnet Weight	34 oz.
Gap Height	.312", 7.9 mm
Voice Coil Diameter	2.0", 51 mm

THIELE & SMALL PARAMETERS*

Fs	35 Hz
Re	6.32 Ω
Le	1.10 mH
Qms	8.10
Qes	0.63
Qts	0.58
Vas	11.80 cu.ft., 334.60 liters
Vd	330.0 cc
Cms	0.35 mm/N
BL	11.50 T-M
Mms	60 grams
EBP	56
Xmax	4.00 mm
Sd	823.7 cm2
Xlim	11.6 mm

MOUNTING INFORMATION

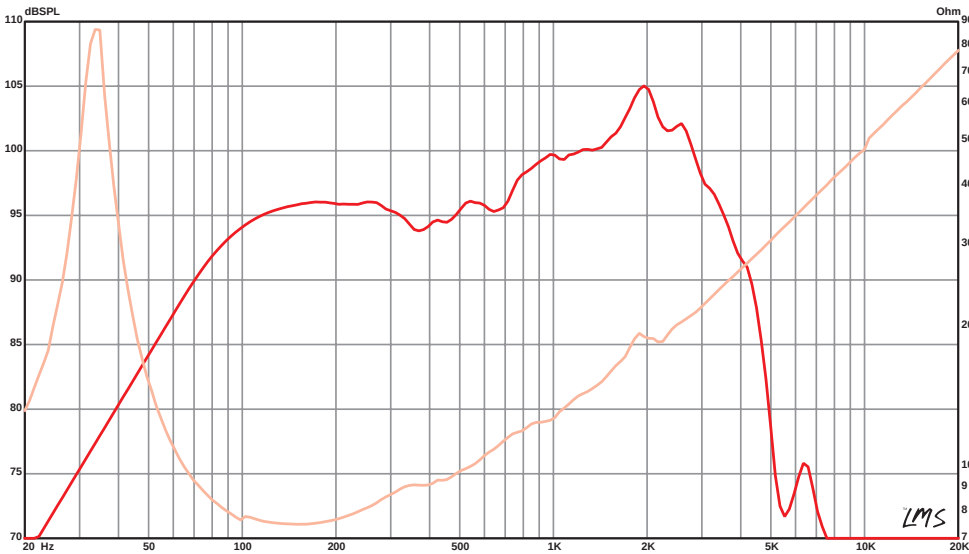
Recommended Enclosure Volume	
Sealed	45.00–62.00 liters, 1.60–2.20 cu.ft.
Vented	99.00–175.60 liters, 3.50–6.20 cu.ft.
Driver Volume Displaced	0.118 cu.ft., 3.33 liters
Overall Diameter	15.15", 384.8 mm
Baffle Hole Diameter	13.87", 352.3 mm
Front Sealing Gasket	Yes
Rear Sealing Gasket	Yes
Mounting Holes Diameter	0.25", 6.4 mm
Mounting Holes B.C.D.	14.56", 369.8 mm
Depth	6.05", 153.7 mm
Net Weight	8.80 lbs, 3.99 kg
Shipping Weight	10.80 lbs, 4.90 kg

MATERIALS OF CONSTRUCTION

- Copper voice coil
- Polyimide former
- Ferrite magnet
- Vented and extended core
- Pressed steel basket
- Paper cone
- Cloth cone edge
- Solid composition paper dust cap



FREQUENCY RESPONSE & IMPEDANCE CURVE*



* See footnotes on page 83 for information regarding usable frequency range, nominal impedance, power rating and sensitivity.

AMERICAN STANDARD SERIES

GAMMA 15A-2

Recommended for vented professional audio enclosures as a mid/hi or full-range and monitor. Also suited for bass guitar.



SPECIFICATION

Nominal Basket Diameter	15.0", 381 mm
Nominal Impedance*	8 Ω
Power Rating**	
Watts	300 W
Music Program	600 W
Resonance	33 Hz
Usable Frequency Range	48 Hz – 3.3 kHz
Sensitivity***	98.6 dB
Magnet Weight	59 oz.
Gap Height	.312", 7.9 mm
Voice Coil Diameter	2.0", 51 mm

THIELE & SMALL PARAMETERS*

Fs	33 Hz
Re	5.98 Ω
Le	1.73 mH
Qms	5.13
Qes	0.32
Qts	0.30
Vas	11.10 cu.ft., 314.10 liters
Vd	257.0 cc
Cms	0.31 mm/N
BL	17.20 T-M
Mms	78 grams
EBP	103
Xmax	3.00 mm
Sd	856.3 cm ²
Xlim	11.8 mm

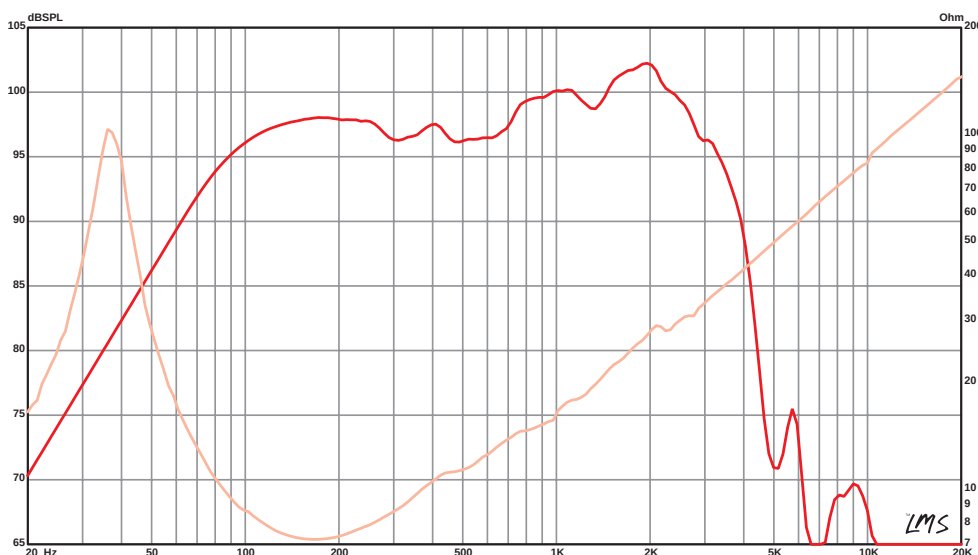
MOUNTING INFORMATION

Recommended Enclosure Volume	
Sealed	N/A
Vented	40.00–136.00 liters, 1.40–4.80 cu.ft.
Driver Volume Displaced	0.128 cu.ft., 3.62 liters
Overall Diameter	15.15", 384.8 mm
Baffle Hole Diameter	13.87", 352.3 mm
Front Sealing Gasket	Yes
Rear Sealing Gasket	Yes
Mounting Holes Diameter	0.25", 6.4 mm
Mounting Holes B.C.D.	14.56", 369.8 mm
Depth	5.94", 150.9 mm
Net Weight	11.80 lbs, 5.35 kg
Shipping Weight	14.10 lbs, 6.40 kg

MATERIALS OF CONSTRUCTION

Aluminum voice coil
Polyimide former
Ferrite magnet
Vented core
Pressed steel basket
Paper cone
Cloth cone edge
Solid composition paper dust cap

FREQUENCY RESPONSE & IMPEDANCE CURVE*



* See footnotes on page 83 for information regarding usable frequency range, nominal impedance, power rating and sensitivity.

AMERICAN STANDARD SERIES

ALPHA-15A

Recommended for professional audio and bass guitar applications as a woofer in a vented or sealed enclosure.



SPECIFICATION

Nominal Basket Diameter	15.0", 381 mm
Nominal Impedance*	8 Ω
Power Rating**	
Watts	200 W
Music Program	400 W
Resonance	41 Hz
Usable Frequency Range	46 Hz – 3.5 kHz
Sensitivity***	97.0 dB
Magnet Weight	25 oz.
Gap Height	.250", 6.4 mm
Voice Coil Diameter	1.5", 38 mm

THIELE & SMALL PARAMETERS*

Fs	41 Hz
Re	5.88 Ω
Le	0.84 mH
Qms	7.23
Qes	1.53
Qts	1.26
Vas	9.20 cu.ft., 260.00 liters
Vd	325.0 cc
Cms	0.25 mm/N
BL	7.70 T-M
Mms	59 grams
EBP	27
Xmax	3.80 mm
Sd	856.3 cm ²
Xlim	8.4 mm

MOUNTING INFORMATION

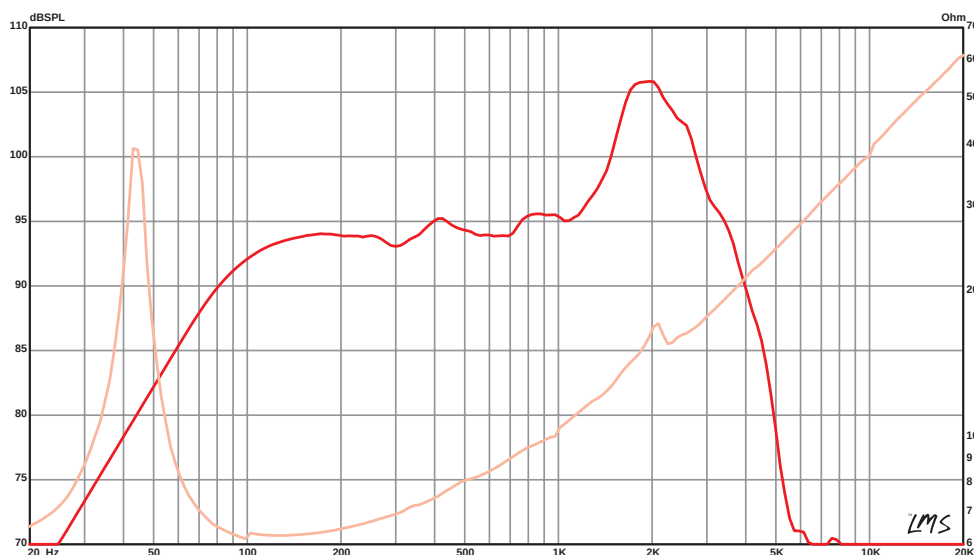
Recommended Enclosure Volume	
Sealed	71.00–85.00 liters, 2.50–3.00 cu.ft.
Vented	106.00–177.00 liters, 3.75–6.25 cu.ft.
Driver Volume Displaced	0.113 cu.ft., 3.21 liters
Overall Diameter	15.15", 384.8 mm
Baffle Hole Diameter	13.87", 352.3 mm
Front Sealing Gasket	Yes
Rear Sealing Gasket	Yes
Mounting Holes Diameter	0.25", 6.4 mm
Mounting Holes B.C.D.	14.56", 369.8 mm
Depth	5.83", 148.1 mm
Net Weight	6.70 lbs, 3.04 kg
Shipping Weight	8.80 lbs, 3.99 kg

MATERIALS OF CONSTRUCTION

Copper voice coil
Polyimide former
Ferrite magnet
Vented and extended core
Pressed steel basket
Paper cone
Cloth cone edge
Solid composition paper dust cap



FREQUENCY RESPONSE & IMPEDANCE CURVE*



* See footnotes on page 83 for information regarding usable frequency range, nominal impedance, power rating and sensitivity.

HF PRODUCTS AND COMPONENTS

From high quality compression drivers to well-designed horn flares and crossovers, Eminence has an HF device to complete your loudspeaker system.

Whether for use in Eminence loaded cabinets or an upgrade to an existing system, Eminence HF drivers achieve extraordinary levels of audio performance. Add to that the same unrivaled durability you've come to expect from Eminence bass and midrange transducers, and you've got true professional value.

The Eminence assortment of horns is engineered to provide the perfect compliment to Eminence HF drivers. Each horn is manufactured from the highest quality materials to obtain a balance of strength, durability, and weight savings.

Eminence Professional Series crossovers are technically superior passive filters available in board-only or cabinet-ready configurations. Our high-pass protection circuits center around custom manufactured aerospace lamps, working as positive temperature coefficient series varistors to protect your HF device without introducing distortion.

From low-pass and high-pass filters, to two-way and three-way units with multiple crossover point options, and L-PADs for more custom HF level control, there is an Eminence crossover solution to meet your needs.



NEW

PSD:2013-8

- ☒ SCREW-ON
☒ BOLT-ON

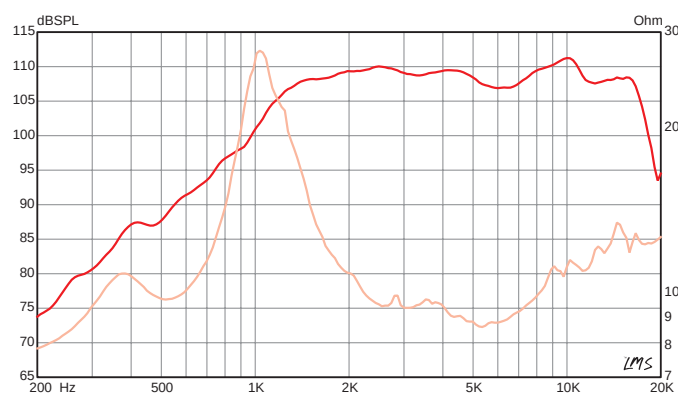
SPECIFICATION

Throat Size	1.0", 25.4 mm
Nominal Impedance*	8 or 16 Ω
Power Rating**	85 W (AES)
Resonance	438 Hz
Usable Frequency Range	1.5 kHz - 20 kHz
Recommended Crossover	1.5 kHz / 12 dB
Sensitivity***	108.3 dB
Magnet Material	Ferrite
Magnet Weight	34 oz, 0.96 kg
Voice Coil Diameter	2.0", 51 mm
Voice Coil Former	Polymide
Diaphragm Material	Titanium
Minimum Impedance	8.7 ohm @ 5.3 kHz
Re	6.80 Ω

MOUNTING INFORMATION

Overall Diameter	5.25", 133.4 mm
Driver Volume Displaced	0.018 cu.ft., 0.51 liters
Depth	2.30", 58.4 mm
Weight	5.90 lb, 2.7 kg
Mounting Thread	1 3/8 in. 18 ext.
Mounting Holes Diameter	2X 1/4-20
Mounting Holes B.C.D.	3.00", 76.2 mm

FREQUENCY RESPONSE & IMPEDANCE CURVE*



* See footnotes on page 83 for information regarding usable frequency range, nominal impedance, power rating and sensitivity.



PSD:2002-8

- ✓ SCREW-ON
- ✓ BOLT-ON

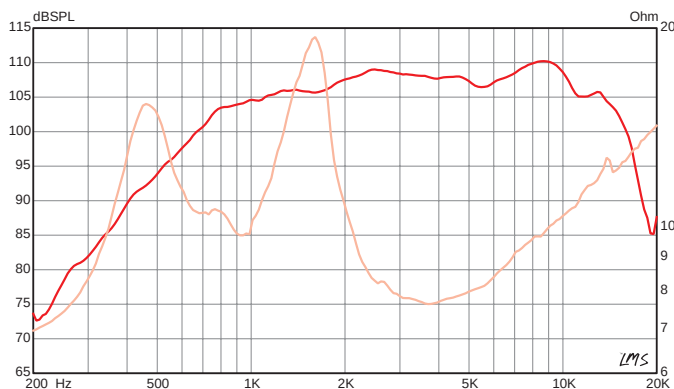
SPECIFICATION

Throat Size	1.0", 25.4 mm
Nominal Impedance*	8 or 16 Ω
Power Rating**	80 W (AES)
Resonance	540 Hz
Usable Frequency Range	1.2 kHz - 20 kHz
Recommended Crossover	1.2 kHz / 12 dB
Sensitivity***	106.1 dB
Magnet Material	Ferrite
Magnet Weight	34 oz, 0.96 kg
Voice Coil Diameter	2.0", 51 mm
Voice Coil Former	Polyimide
Diaphragm Material	Titanium
Minimum Impedance	7.6 ohm @ 3.7 kHz
Re	6.10 Ω

MOUNTING INFORMATION

Overall Diameter	5.25", 133.4 mm
Driver Volume Displaced	0.018 cu.ft., 0.50 liters
Depth	2.20", 55.9 mm
Weight	5.00 lb, 2.3 kg
Mounting Thread	1 3/8 in. 18 ext.
Mounting Holes Diameter	2X 1/4-20 or 3x M6
Mounting Holes B.C.D.	3.00", 76.2 mm or 2.25", 57.2 mm

FREQUENCY RESPONSE & IMPEDANCE CURVE*



ASD:1001

- ✓ SCREW-ON
- ✓ BOLT-ON

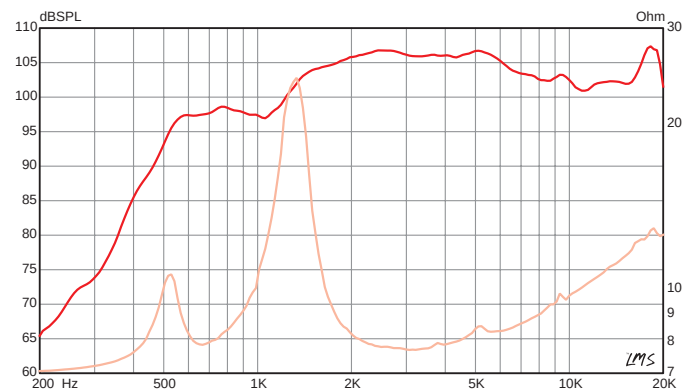
SPECIFICATION

Throat Size	1.0", 25.4 mm
Nominal Impedance*	8 Ω
Power Rating**	50 W (EIA-426A)
Resonance	592 Hz
Usable Frequency Range	2.5 kHz - 20 kHz
Recommended Crossover	2.5 kHz / 18 dB
Sensitivity***	104.4 dB
Magnet Material	Ferrite
Magnet Weight	12 oz, 0.34 kg
Voice Coil Diameter	1.3", 33 mm
Voice Coil Former	Aluminum
Diaphragm Material	Titanium
Minimum Impedance	7.7 ohm @ 3.0 kHz
Re	6.70 Ω

MOUNTING INFORMATION

Overall Diameter	3.50", 88.9 mm
Driver Volume Displaced	0.009 cu.ft., 0.26 liters
Depth	2.45", 62.2 mm
Weight	2.00 lb, 0.9 kg
Mounting Thread	1 3/8 in. 18 ext.
Mounting Holes Diameter	2X M6
Mounting Holes B.C.D.	3.00", 76.2 mm

FREQUENCY RESPONSE & IMPEDANCE CURVE*



* See footnotes on page 83 for information regarding usable frequency range, nominal impedance, power rating and sensitivity.



NSD:2005-8

- ☒ SCREW-ON
- ☒ BOLT-ON

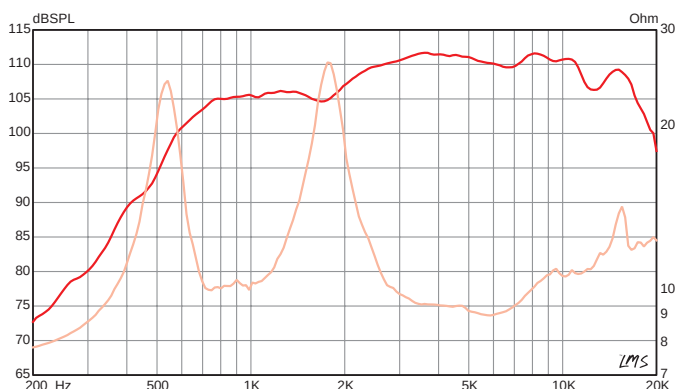
SPECIFICATION

Throat Size	1.0", 25.4 mm
Nominal Impedance*	8 or 16 Ω
Power Rating**	50 W (AES)
Resonance	578 Hz
Usable Frequency Range	1.5 kHz - 20 kHz
Recommended Crossover	1.5 kHz / 12 dB
Sensitivity***	109.0 dB
Magnet Material	Neodymium
Magnet Weight	4 oz, 0.11 kg
Voice Coil Diameter	2.0", 51 mm
Voice Coil Former	Polyimide
Diaphragm Material	Titanium
Minimum Impedance	9.0 ohm @ 5.9 kHz
Re	6.80 Ω

MOUNTING INFORMATION

Overall Diameter	3.87", 98.3 mm
Driver Volume Displaced	0.008 cu.ft., 0.22 liters
Depth	1.75", 44.5 mm
Weight	2.00 lb, 0.9 kg
Mounting Thread	1 3/8 in. 18 ext.
Mounting Holes Diameter	2X 1/4-20
Mounting Holes B.C.D.	3.00", 76.2 mm

FREQUENCY RESPONSE & IMPEDANCE CURVE*



APT:50

- ☒ SCREW-ON
- ☐ BOLT-ON

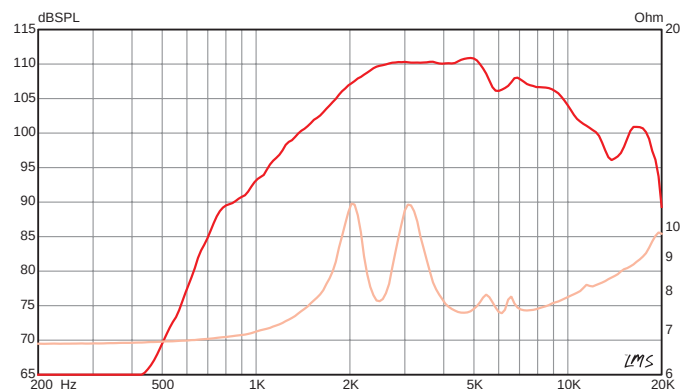
SPECIFICATION

Throat Size	1.0", 25.4 mm
Nominal Impedance*	8 Ω
Power Rating**	35 W (AES)
Resonance	2.1 kHz
Usable Frequency Range	3.5 kHz - 20 kHz
Recommended Crossover	3.5 kHz / 12 dB
Sensitivity***	104.7 dB
Magnet Material	Ferrite
Magnet Weight	8 oz, 0.23 kg
Voice Coil Diameter	1.0", 25 mm
Voice Coil Former	Kapton
Diaphragm Material	Phenolic
Minimum Impedance	7.4 ohm @ 6.1 kHz
Re	6.30 Ω

MOUNTING INFORMATION

Overall Diameter	2.75", 69.9 mm
Driver Volume Displaced	0.004 cu.ft., 0.12 liters
Depth	2.53", 64.3 mm
Weight	1.70 lb, 0.8 kg
Mounting Thread	Use Apt Horn or Adaptor
Mounting Holes Diameter	N/A
Mounting Holes B.C.D.	N/A

FREQUENCY RESPONSE & IMPEDANCE CURVE*



* See footnotes on page 83 for information regarding usable frequency range, nominal impedance, power rating and sensitivity.



NEW

PSD:3014-8

☐ SCREW-ON
☒ BOLT-ON

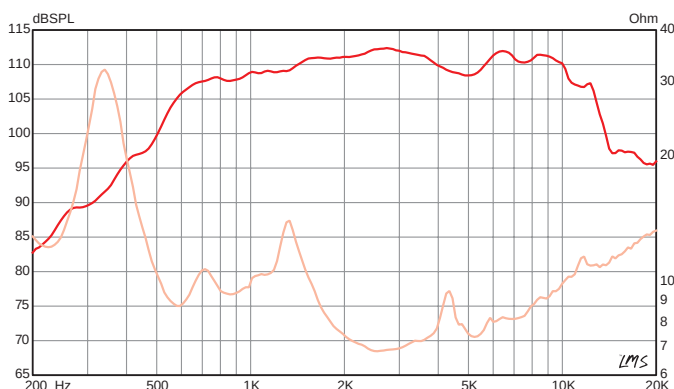
SPECIFICATION

Throat Size	1.4", 35.6 mm
Nominal Impedance*	8 or 16 Ω
Power Rating**	100 W (AES)
Resonance	419 Hz
Usable Frequency Range	800 Hz - 20 kHz
Recommended Crossover	800 Hz / 12 dB
Sensitivity***	108.4 dB
Magnet Material	Ferrite
Magnet Weight	80 oz, 2.27 kg
Voice Coil Diameter	3.0", 76 mm
Voice Coil Former	Polyimide
Diaphragm Material	Titanium w/ geodesic ribs for increased stiffness and break-up control.
Minimum Impedance	6.8 ohm @ 2.5 kHz
Re	4.80 Ω

MOUNTING INFORMATION

Overall Diameter	7.90", 200.7 mm
Driver Volume Displaced	0.048 cu.ft., 1.36 liters
Depth	3.10", 78.7 mm
Weight	13.70 lb, 6.2 kg
Mounting Thread	N/A
Mounting Holes Diameter	4X 1/4-20
Mounting Holes B.C.D.	4.00", 101.6 mm

FREQUENCY RESPONSE & IMPEDANCE CURVE*



PSD:3006-8

☐ SCREW-ON
☒ BOLT-ON

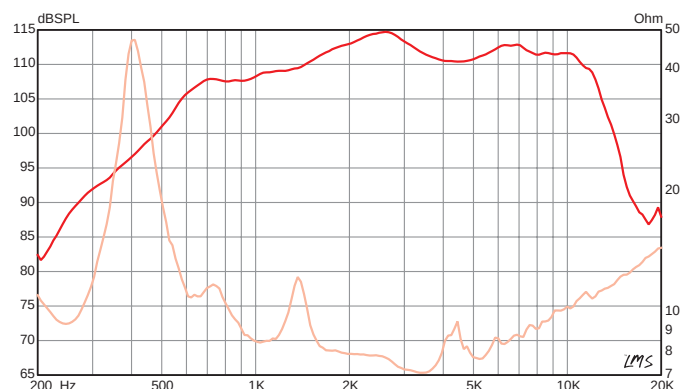
SPECIFICATION

Throat Size	2.0", 50.8 mm
Nominal Impedance*	8 or 16 Ω
Power Rating**	100 W (AES)
Resonance	470 Hz
Usable Frequency Range	800 Hz - 20 kHz
Recommended Crossover	800 Hz / 12 dB
Sensitivity***** (@ 1W/1m across 800 Hz-20 kHz on axis on H2EA horn)	108.8 dB
Magnet Material	Ferrite
Magnet Weight	80 oz, 2.27 kg
Voice Coil Diameter	3.0", 76 mm
Voice Coil Former	Polyimide
Diaphragm Material	Titanium w/ geodesic ribs for increased stiffness and break-up control.
Minimum Impedance	7.1 ohm @ 3.4 kHz
Re	4.80 Ω

MOUNTING INFORMATION

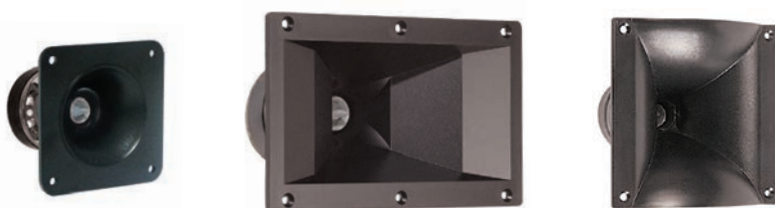
Overall Diameter	7.90", 200.7 mm
Driver Volume Displaced	0.048 cu.ft., 1.36 liters
Depth	3.10", 78.7 mm
Weight	13.50 lb, 6.1 kg
Mounting Thread	N/A
Mounting Holes Diameter	4X 1/4-20
Mounting Holes B.C.D.	4.00", 101.6 mm

FREQUENCY RESPONSE & IMPEDANCE CURVE*



* See footnotes on page 83 for information regarding usable frequency range, nominal impedance, power rating and sensitivity.

HORN FLARES, SUPERTWEETER OPTIONS AND ADAPTORS



APT horn flares are available separately for use with any driver with 1 3/8" ext. thread.

	APT:80	APT:150	APT:200
Description	APT:50 Driver with APT:80S Horn	APT:50 Driver with APT:150S Horn	APT:50 Driver with APT:200S Horn
Type	Conical	Constant Directivity	Bi-Radial
Throat Size	1", 25 mm	1", 25 mm	1", 25 mm
Dispersion	80° Conical	100° x 50°	90° x 90°
Recommended Crossover	3.5 kHz / 12 dB	3.5 kHz / 12 dB	3.5 kHz / 12 dB
Width/Height/Depth	3.4" x 3.4" x 3.7", 87 x 87 x 95 mm	7.6" x 4.5" x 5.1", 192 x 114 x 130 mm	5.9" x 6.0" x 6.3", 150 x 152 x 160 mm
Cut-out	3.15", 80 mm	6.7" x 3.4", 170 x 86 mm	4.3" x 4.4", 109 x 112 mm
Attachment Method	Screw-on	Screw-on	Screw-on
Weight	1.8 lb., 0.82 kg	1.9 lb., 0.86 kg	2.5 lb., 1.13 kg
Material	ABS	ABS	ABS



	H290S	H2EA	BH410
Type	Radial	Exponential	Exponential
Throat Size	1.0", 25.4 mm	2.0", 50.8 mm	1.0", 25.4 mm
Attachment Method	Screw-on or Bolt-on (H290B)	Bolt-on	Screw-on
Dispersion	90 x 40	60 x 40	60 x 60
Recommended Crossover	1.0 kHz	700 Hz	1.2 kHz
Width/Height/Depth	11.7" x 6.6" x 6.6", 297.2 x 167.6 x 167.6 mm	12.4" x 7.3" x 6.1", 315 x 185.4 x 154.9 mm	5.59" x 5.59" x 4.38", 142 x 142 x 111.3 mm
Cut-out	9.7 x 4.9", 246 x 124 mm	11.3 x 6.3", 287 x 160 mm	3.56 x 3.56", 90.4 x 90.4 mm
Weight	1.10 lb., 0.50 kg	4.90 lb., 2.22 kg	0.35 lb., 0.16 kg
Material	ABS	Aluminum	ABS

ADAPTORS



B2S-A

Aluminum adaptor converts bolt-on driver to accept a screw-on horn. 2x 1/4-20 or 3x M6 driver to 1 3/8" 18 thread horn.



S2B-A

Aluminum adaptor converts screw-on driver to accept a bolt-on horn. 1 3/8" 18 ext. driver to 2x 1/4-20 or 3x M6 horn.

CABINET HARDWARE



TOP HAT-CH

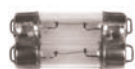
Adjustable-angle speaker stand receptacle for loud-speaker boxes. Vertical angle can be adjusted in 4° increments to +/- 18°. Fits SPS56B and most other standard speaker stands. Internal Ø 36mm. Black polyamide. Patent pending.

USAGE GUIDE

Driver	Horn Option
APT:50	APT:80S
	APT:150S
	APT:200S
	BH410
	H290S
ASD1001S	APT:150**
	APT:200S
	H290S
	BH410
ASD1001B	H290B
NSD2005S	APT:150S**
	APT:200S
	H290S
	BH410
NSD2005B	H290B
PSD2002S	APT:200S**
	H290S**
PSD2002B	H290B
PSD2013S	APT:200S**
	H290S**
PSD2013B	H290B
PSD3006	H2EA

* B2S or S2B adaptor required
** Driver bracing recommended

PX-BULB



Replacement bulb

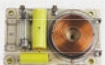
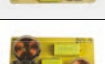
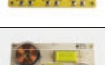
PX-LPAD



Recommended for LF and HF level matching unless using our coax crossover PXB2:2k5CX.

Type: L-Pad
Cabinet Ready: Yes
Impedance: 8 ohm
Power Handling: 100 W

CROSSOVERS

	MODEL	TYPE	CABINET READY	CROSSOVER FREQUENCY	SLOPE	IMPEDANCE	POWER HANDLING	HF LEVEL	MOUNTING CUT-OUT
	PX:250	Low-pass	Yes	250 Hz	12 dB/octave Butterworth	8 Ω	600 W		3.875" x 6", 98.4 x 152.4 mm
	PXB:250	Low-pass	No	250 Hz	12 dB/octave Butterworth	8 Ω	600 W		
	PXB:500	Low-pass	No	500 Hz	12 dB/octave Butterworth	8 Ω	600 W		
	PXB:1k6	High-pass	No	1.6 kHz	18 dB/octave Butterworth	8 Ω	400 W		
	PXB:3k5	High-pass	No	3.5 kHz	18 dB/octave Butterworth	8 Ω	400 W		
	PXB:5k0	High-pass	No	5 kHz	18 dB/octave Butterworth	8 Ω	400 W		
	PX2:1k6	2-way	Yes	1.6 kHz	12 dB/octave LP 18 dB/octave HP Butterworth	8 Ω	400 W	9 dB	3.875" x 6", 98.4 x 152.4 mm
	PX2:3k5	2-way	Yes	3.5 kHz	12 dB/octave LP 18 dB/octave HP Butterworth	8 Ω	400 W	9 dB	3.875" x 6", 98.4 x 152.4 mm
	PXB2:500	2-way	No	500 Hz	12 dB/octave LP 18 dB/octave HP Butterworth	8 Ω	400 W		
	PXB2:800	2-way	No	800 Hz	12 dB/octave LP 18 dB/octave HP Butterworth	8 Ω	400 W		
	PXB2:1k6	2-way	No	1.6 kHz	12 dB/octave LP 18 dB/octave HP Butterworth	8 Ω	400 W		
	PXB2:2k5 CX	2-way	No	2.5 kHz	12 dB/octave LP 18 dB/octave HP Custom	8 Ω	250 W		
	PXB2:3k5	2-way	No	3.5 kHz	12 dB/octave LP 18 dB/octave HP Butterworth	8 Ω	400 W		
	PXB2:5k0	2-way	No	5 kHz	12 dB/octave LP 18 dB/octave HP Butterworth	8 Ω	400 W		
	PXB3:1k6	3-way	No	500 Hz / 1.6 kHz	12 dB/octave LP 6 dB/octave MP 18 dB/octave HP Butterworth	8 Ω	400 W		
	PXB3:3k5	3-way	No	500 Hz / 3.5 kHz	12 dB/octave LP 6 dB/octave MP 18 dB/octave HP Butterworth	8 Ω	400 W		
	PXB3:5k0	3-way	No	500 Hz / 5 kHz	12 dB/octave LP 6 dB/octave MP 18 dB/octave HP Butterworth	8 Ω	400 W		

UNDERSTANDING LOUDSPEAKER DATA

The ability to choose the most appropriate loudspeaker for a particular enclosure is directly related to your understanding of the performance data that manufacturers provide with their products. Prior to 1970, there were no easy or affordable methods accepted as standard in the industry for obtaining this data. The recognized methods were expensive and often unrealistic for the thousands of individuals needing loudspeaker performance information.

THIELE-SMALL PARAMETERS

In the early seventies, several technical papers were presented to the AES (Audio Engineering Society) that resulted in the development of what we know today as "Thiele-Small Parameters". These papers were authored by A.N. Thiele, and Richard H. Small.

The Thiele and Small papers concentrated on showing how the following parameters define the relationship between a speaker and a particular enclosure. Eminence recommends that you develop a basic understanding for the meaning of each parameter so that you can make informed decisions when choosing your loudspeakers.

FS This parameter is the free-air resonant frequency of a speaker. Simply stated, it is the point at which the weight of the moving parts of the speaker becomes balanced with the force of the speaker suspension when in motion. It is important to know this information so that you can prevent your enclosure from ringing like a bell when it reaches its resonant frequency. As a general rule of thumb, a lower F_s indicates a woofer that would be better for low-frequency reproduction than a woofer with a higher F_s . However, other parameters affect the ultimate performance of a woofer as well and may make a speaker with a higher F_s a better candidate for your application.

RE This parameter is very simply the DC resistance of the driver in question. In other words, this measurement is made with an ohm meter and is often referred to as the "DCR". This measurement will almost always be less than the impedance listed by the manufacturer. Many consumers get concerned when they see that the R_e is less than the published impedance and fear that their amplifier is getting a load that is too heavy. Due to the fact that the inductance of a speaker rises with a rise in frequency, it is not likely that the amplifier will often see the DC resistance as its load.

LE This parameter is the voice coil inductance of the speaker measured in millihenries (mH). The industry standard is to measure inductance at 1,000 Hz. This is a difficult parameter to explain, but basically as frequencies get higher there will be a rise in impedance above the DC resistance rating. This can be attributed to the fact that the voice coil is acting as an inductor. Consequently, the impedance of a speaker is not a fixed resistance, but can be represented as a curve that changes as the input frequency changes. Maximum impedance or Z_{max} occurs at F_s .

Q PARAMETERS Q_{ts} , Q_{es} , and Q_{tc} are all measurements related to the control of a speaker's suspension when it reaches the resonant frequency.

QMS is a measurement of the control coming from the speaker's mechanical suspension system; the surround and spider.

QES is a measurement of the control coming from the speaker's electrical suspension system; the voice coil and magnet.

QTS is called the "Total Q" of the driver and is derived from an equation where Q_{es} is multiplied by Q_{ms} and the result is divided by the sum of the same. The result is Q_{ts} . As a general guideline, woofers fall into three categories relative to their Q_{ts} :

1. Q_{ts} of .4 or below indicates a woofer well suited for a vented enclosure.
2. Q_{ts} between .4 and .7 indicates a woofer well suited for a sealed enclosure.
3. Q_{ts} of .7 or above indicates a woofer well suited for free-air or infinite baffle applications.

These suggestions are simply rules of thumb and do not always apply. For instance, the Eminence Kilomax 18 has a Q_{ts} of .56 that would indicate a sealed enclosure, but we know that the Kilomax is one of the most highly regarded woofers in the Professional Audio industry for a ported enclosure.

VAS/CMS V_{as} (Not to be confused with the recommended enclosure size) represents the equivalent stiffness in an air volume to the force of the compliance (Cms) of the suspension in a particular speaker. It is one of the trickiest parameters to measure. Air changes relative to humidity and temperature. Cms is measured in meters per Newton. It is the force exerted by the mechanical suspension of the speaker. It is simply a measurement of its stiffness.

VD This parameter is the Peak Diaphragm Displacement Volume. It is the X_{max} (Voice Coil Overhang) of the driver multiplied by the S_d (Surface area of the cone). Simply stated it is a measurement of how much air the cone will move at full excursion and is usually noted in cc.

BL Expressed in Tesla meters is a measurement of the motor strength of a speaker. This is created by the product of the magnetic field strength times the length of wire in the field. If you were to take a given mass, that when placed on the cone of a speaker would move the cone downward from its home position, then measure the current in amperes required to move the cone back to home position, you can calculate BL. The formula is M_a in grams divided the current in amperes.

MMS This parameter is the combination of the weight of the cone assembly plus the driver radiation mass load. Confusing...but the weight of the cone assembly is easy. Most manufacturers know that weight when the speaker is designed. It is the sum of the weight of the cone assembly components. The driver radiation mass load is the confusing part. In simple terminology, it is the weight of the air that the cone will have to push. Air certainly has mass and needs to be recognized in these calculations.





RMS This parameter represents the mechanical resistance of a driver's suspension losses. It is a measurement of the absorption qualities of the speaker suspension and is stated in $N \cdot sec/m$.

EBP This measurement represents F_s / Q_e . It is used in many enclosure design formulas to determine if a speaker is more suitable for a closed or vented design. An EBP close to 100 usually indicates a speaker that is best suited for a vented enclosure. On the contrary, an EBP closer to 50 usually indicates a speaker best suited for a closed box design.

XMAX Short for Maximum Linear Excursion. Speaker output becomes non-linear when the voice coil begins to leave the magnetic gap. Although suspensions can create non-linearity in output, the point at which the number of turns in the gap (see BL) begins to decrease is when distortion starts to increase. Some manufacturers have often used the maximum excursion of the speaker which when exceeded would result in mechanical damage. This parameter is recognized as X_{lim}. The bottom line is; be sure you are comparing apples to apples. Most manufacturers will specify the way this measurement is obtained. Distortion is typically very audible before X_{lim} is reached due to the increase in non-linearity in the motor and suspensions.

SD This parameter is the actual surface area of the cone, normally given in square cm.

ZMAX This parameter represents the speaker's impedance at resonance and it is usually many times the DCR of the driver.

ADDITIONAL PERFORMANCE DATA

In addition to Thiele-Small Parameters, loudspeaker manufacturers typically publish additional measurements and performance information. Again, it is wise to become familiar with this data and what it actually means to you.

USABLE FREQUENCY RANGE This data is relatively self-explanatory. It is the frequency range for which Eminence feels the device will prove useful. Each manufacturer uses different techniques for determining "Usable Frequency Range". Most methods are recognized as acceptable in the industry, but can lend different results.

Eminence response curves are measured as follows: All speakers are tested at 1W/1m using a variety of test set-ups for the appropriate impedance. [LMS using 0.25" supplied microphone (software calibrated) mounted 1m from wall/baffle.] [2 ft. X 2 ft. baffle is built into the wall with the speaker mounted flush against a steel ring for minimum diffraction.] [Hafler P1500 Trans-Nova amplifier] [2,700 cu. ft. anechoic chamber with fiberglass on all six surfaces (three with custom-made wedges).]

SPL (Average Sensitivity) This data represents one of the most useful specifications published for any transducer. It is a representation of the output you can expect from a device relative to the input power. This is important because it requires 2 times the power to increase the volume of a speaker 3 dB.

To increase the volume of a 50 watt guitar amplifier 3 dB (an audible, but relatively small amount), it would require a total of 100 watts of power. The same thing could be achieved by replacing the speaker with one that is 3 dB more sensitive (usually a more economical alternative).

Most manufacturers determine sensitivity by putting the speaker in a baffle and measuring the sound pressure level inside an anechoic chamber at a distance of one meter, with 1 watt of input power across the frequency response curve. A loudspeaker measurement software program then would generally calculate the average sound pressure level over the response curve. This is a good method and usually very accurate. The problem is that one manufacturer may place the microphone one meter from the dust cap of the speaker and gain a distinct advantage over the manufacturer who placed the microphone one meter from the baffle board. Again, be sure you understand how this specification was derived.

The Eminence method represents the average output across the usable frequency range when applying 1W/1m into the nominal impedance. i.e: 2.83V/8Ω, 4V/16Ω.

POWER RATING This specification is very important to transducer selection. Obviously, you need to choose a loudspeaker that is capable of handling the input power you are going to provide. By the same token, you can destroy a loudspeaker by using too little power. Generally speaking, the number one contributor to a transducer's ability to handle power is its ability to release thermal energy. Those loudspeaker characteristics are affected by several design choices, but most notably voice coil size, magnet size, venting, and the adhesives used in voice coil construction.

Larger coil and magnet sizes provide more area for heat to dissipate, while venting allows thermal energy to escape and cooler air to enter the motor structure. Equally important is the ability of the voice coil to handle thermal energy. Eminence is well known for the use of proprietary adhesives and voice coil components that maximize the coil's ability to handle extreme temperatures.

Mechanical factors must also be considered when determining power handling. A transducer might be able to handle 1,000 watts from a thermal perspective, but would fail long before that level was reached from a mechanical issue such as the coil hitting the back plate, the coil coming out of the gap, the cone buckling from too much outward movement, or the spider bottoming on the top plate. Be sure to consider the suggested usable frequency range and the X_{lim} parameter in conjunction with the power rating and enclosure design to avoid such failures.

The Eminence power rating is derived using an EIA 426A noise source and test standard. All tests are conducted for 8 hours in a free-air, non-temperature controlled environment. The Eminence Music Program rating is double that of our standard Watts rating.



The Art and Science of Sound

*From design and manufacturing to the stage or studio.
Once you've experienced the performance of Eminence,
you'll never accept anything else.*

MISSION STATEMENT

*Eminence is dedicated to providing the best Quality, Value and Service
to meet our customers' needs.*

CORE VALUES

Mark 10:43 – 45

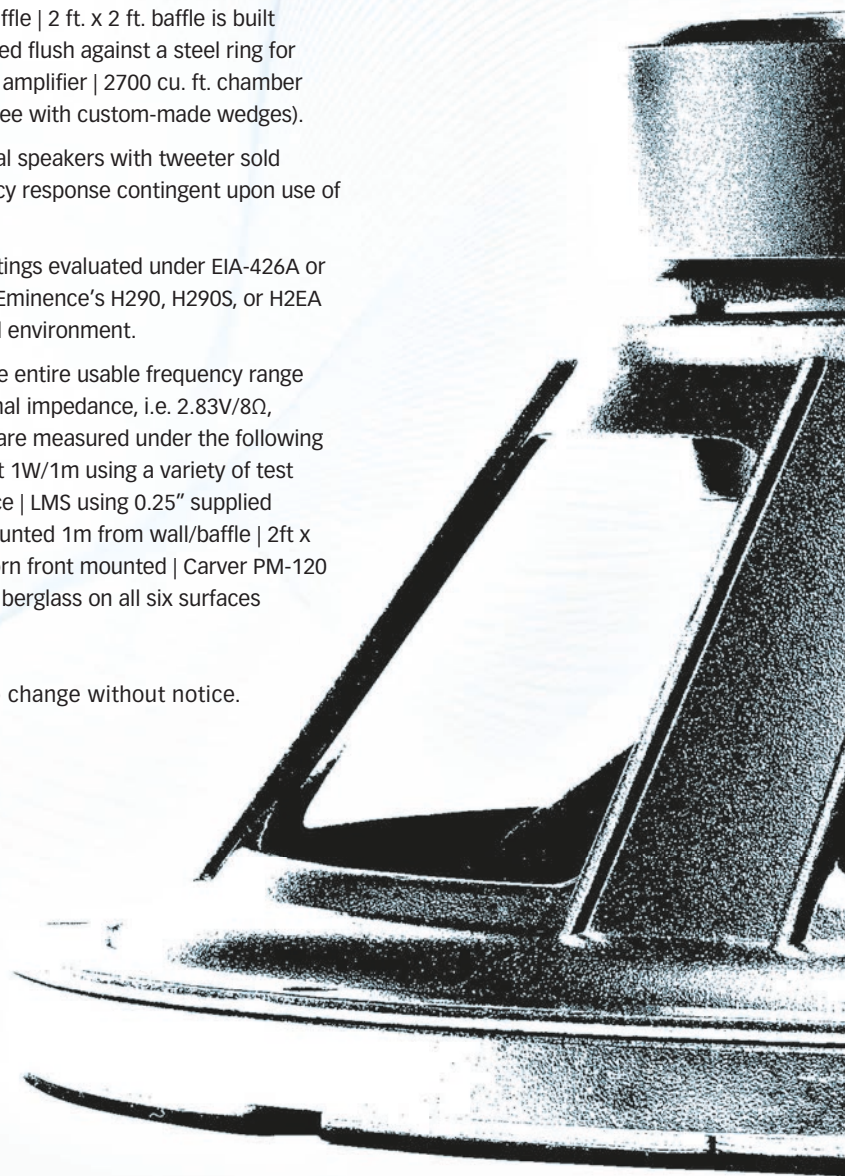
*"...whoever wants to become great among you must be your servant...
For even the Son of Man did not come to be served, but to serve,
and to give his life as a ransom for many."*

At Eminence, our business principles are rooted in our personal faith and beliefs. We strive to show humility, respect and fairness toward all. We are grateful for our successes and learn from our failures. We are called to use our gifts and talents to serve others. It is through this service that we are truly blessed each and every day.

FOOTNOTES

- * Please consult www.eminence.com for specifications of models with alternative impedances.
- ** Multiple units exceed published ratings evaluated under EIA 426A specification while tested in a free-air, non-temperature-controlled environment.
- *** The average output across the usable frequency range when applying 1W/1m into the nominal impedance. i.e: 2.83V/8 Ω , 4V/16 Ω . Eminence response curves are measured under the following conditions: All speakers are tested at 1W/1m using a variety of test set-ups for the appropriate impedance | LMS using 0.25" supplied microphone (software calibrated) mounted 1m from wall/baffle | 2 ft. x 2 ft. baffle is built into the wall with the speaker mounted flush against a steel ring for minimum diffraction | Carver PM-120 amplifier | 2700 cu. ft. chamber with fiberglass on all six surfaces (three with custom-made wedges).
- **** BETA 8CX, 10CX, and 12CX are coaxial speakers with tweeter sold separately. Published usable frequency response contingent upon use of ASD:1001 HF Driver.
- ***** Multiple units exceeded published ratings evaluated under EIA-426A or AES specification while mounted on Eminence's H290, H290S, or H2EA horn in a non-temperature-controlled environment.
- ***** The average on axis output across the entire usable frequency range when applying 1W/1m into the nominal impedance, i.e. 2.83V/8 Ω , 4V/16 Ω . Eminence response curves are measured under the following conditions: All speakers are tested at 1W/1m using a variety of test set-ups for the appropriate impedance | LMS using 0.25" supplied microphone (software calibrated) mounted 1m from wall/baffle | 2ft x 2ft baffle is built into the wall with horn front mounted | Carver PM-120 amplifier | 2700 cu.ft. chamber with fiberglass on all six surfaces (three with custom-made wedges).

Prices and specifications subject to change without notice.





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